

Site: SANGAMO
 Break: 10.14
 Other: v.2

ROUTING AND TRANSMITTAL SLIP		ACTION
1 TO (Name, office symbol or location) Sargent	INITIALS	CIRCULATE
	DATE	COORDINATION
2 Patrick	INITIALS	FILE
	DATE	INFORMATION
3 Harlow	INITIALS <i>RM</i>	NOTE AND RETURN
	DATE <i>11/4</i>	PER CONVERSATION
4 Traina <i>Don 11/4</i> <i>BT</i>	INITIALS	SEE ME
	DATE	SIGNATURE X
REMARKS Ravan Attached is the Investigation Report and Complaint on Sangamo. The Table of Contents and Exhibits are presently being prepared and will be added when they are completed. Do NOT use this form as a RECORD of approvals, concurrences, disapprovals, clearances, and similar actions		
FROM (Name, office symbol or location) Ronnie Allen	DATE	11/10
	PHONE	3506

OPTIONAL FORM 41
 AUGUST 1967
 GSA FPMR (41CFR) 100-11.206

c48-16-81594-1 552-103 GPO 5041-101



10726408

Site:	_____
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 - 1. NPDES Permit Number SC0000141. This is the permit upon which this case is based.
 - 2. Original application for permit - submitted in June 1971.
 - 3. There is not an Exhibit 3.
 - 4. Letter from Sangamo to EPA, dated January 15, 1973. Company said initial application accurately describes the waste discharge.
 - 5. Letter from EPA to Sangamo, dated March 7, 1974, submitting a draft permit to the Company for review and comments.
 - 6. Revised application for permit, dated April 22, 1974.
 - 7. Draft - special conditions for permit - handwritten, dated May 9, 1974.
 - 8. Notes on meeting held on May 13, 1974, includes note on "BCB's" (sic) and toxic standards.
 - 9. Letter from EPA to Sangamo, dated July 18, 1974, submitting public notice and fact sheet - PCB's are not mentioned.
 - 10. NPDES Permit SC0000141 - issued on September 19, 1974.

- 11(a) Discharge Monitoring Report - 12/1/74 - 3/1/75.
- (b) Discharge Monitoring Report - 3/1/75 - 5/31/75.
- (c) Discharge Monitoring Report - 6/1/75 - 8/31/75.
12. Letter from Sangamo to EPA, dated April 30, 1975 - advises EPA that discharge points 002 and 003 are to be combined into 001.
13. Letter from Sangamo to EPA, dated August 6, 1975, concerning the rerouting of discharges 002 and 003 into 001 and requests a modification of the permit.
14. Letter from EPA to Sangamo, dated August 22, 1975, concerning the consolidation of the three outfalls and the procedure of summing the separate limitations to determine the new limits.
- 15(a) Discharge Monitoring Report - 9/1/75 - 11/30/75.
- (b) Discharge Monitoring Report - 12/1/75 - 2/29/76.
- (c) Discharge Monitoring Report - 3/1/76 - 5/31/76.
16. Notice of Violation letter from EPA to Sangamo, dated February 18, 1976 - PCB's are not mentioned.
17. Letter from State of South Carolina to EPA, dated March 16, 1976, pointing out problem with PCB limit in permit.
18. Letter from EPA to Sangamo, dated May 5, 1976 - EPA for the first time advises the Company that the PCB limit is non-detectable.
19. Notes on meeting held between EPA and Sangamo on June 15, 1976.
20. Advisory on eating fish caught in Lake Hartwell - issued on August 13, 1976.
21. Show Cause letter sent to Sangamo by EPA, dated August 23, 1976.
22. Administrative Order 76-111(w) - issued on August 30, 1976.
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25. Agreement proposed on modification of PCB limit in permit - dated October 13, 1976.
- 26(a) Analytical data on PCB's from S & A Laboratory (EPA), dated September 21, 1976.
- (b) Analytical data on PCB's from S & A Laboratory (EPA), dated September 29, 1976.

- 27(a) Chart showing data on PCB's discharged through outfall 001.
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- 28(a) Chart showing analytical data on PCB's discharged through outfall 001 - actual numerical results - samples taken from August 4 - September 21, 1976.
- (b) Chart showing government data on PCB's discharged through outfall 001 - actual numerical results - samples taken from August 24 - October 8, 1976.
- 29. Proposed toxic pollutant standards for PCB's dated July 23, 1976.
- 30. Memorandum from EPA Headquarters to all EPA Enforcement Directors, dated March 19, 1976, concluding that the limit of detection for PCB's using the approved analytical method is 1 part per billion (1 ppb).

The following exhibits are not mentioned in the Investigation Report but may shed some light on the case.

- 31. Draft permit - handwritten - appears to be the one from which the final permit was typed - note the non-detectable limits for PCB's are scratched out for 001 (interim and final) and for the proposed limits for 001, 002 and 003 in the fact sheet which is attached to the draft permit.
- 32(a) Draft Public Notice, Fact Sheet and Permit - handwritten - had to be prior to revised application being submitted in April 1974 - note only one outfall (001) and 0 limit proposed for phenols.
- (b) The draft Public Notice, Fact Sheet, and Permit mentioned in 32(a) - typed.
- 33. Draft - special conditions for permit - dated January 22, 1974 - handwritten - phenol limit is 0.
- 34. Superseded permit - typed - one outfall (001) - phenols limit is non-detectable.
- 35. Letter from Sangamo to EPA, March 21, 1974, requesting extension of time for comments on draft permit.
- 36. Letter from EPA to South Carolina, dated July 24, 1974, submitting a copy of a revised permit to the state for review.
- 37. State of South Carolina certification to permit, dated September 4, 1974.

38. Letter from EPA to Sangamo, dated September 30, 1974, including corrected page 9 of 14 of permit.
39. Letter from Davis & Floyd Engineers, consultants for Sangamo, to EPA, dated October 30, 1974, enclosing a copy of a preliminary engineering report. Note: The cover letter mentions the proposed combining of the 3 outfalls and requests advice on changing the permit. Thus, by at least October 1974 EPA knew of the proposed reduction of number of outfalls.
40. Letter from Sangamo to EPA, dated February 17, 1976, advising EPA that the Company came into compliance with the final limits prior to January 1, 1976.
41. Notice of Violation letter from EPA to Sangamo, dated April 18, 1975 - again PCB's not included as a violation.
42. Report submitted by Sangamo to EPA at meeting held on June 15, 1976 - report concerns PCB's.
43. Letter from State of South Carolina to Davis & Floyd Engineers, dated August 18, 1976, concerning PCB's and efforts to clean them up.
44. Letter from Sangamo to the State of South Carolina, dated August 24, 1976, concerning elimination of drums containing PCB's from the facility.
45. Investigation Report prepared by Wayne Mathis, EPA, from an on-site visit - dated August 24, 1976.
46. Letter from Sangamo to State of South Carolina, dated August 25, 1976, submitting a proposed schedule for completing a new pond.
47. Letter from Sangamo to EPA, dated August 30, 1976, advising EPA that the first equalization pond was bypassed on August 27, 1976, in accordance with Administrative Order 76-111(w).
48. Letter from Sangamo to EPA, dated September 2, 1976, pertaining to clean-up of dumps containing PCB's in area.
49. Letter from EPA to Sangamo, dated September 13, 1976, responding to September 2, 1976, letter (Exhibit 48).
50. Memorandum from State of South Carolina, dated September 17, 1976, concerning meeting between Sangamo and the state.
51. Investigation Report prepared by Wayne Mathis, EPA, from an on-site visit - dated September 20, 1976.
52. Analytical data from Sangamo, includes PCB's results from August 4 - September 2, 1976.
53. Same as 52--August 4 - September 8, 1976.
54. Same as 52--August 4 - September 20, 1976.

55. Historical data on PCB's in area of Pickens, South Carolina - prepared by State of South Carolina.
56. Report on PCB's contained in fish near Pickens, South Carolina, and Lake Hartwell.
57. S & A Laboratory (EPA) report on PCB's contained in fish at and near Lake Hartwell - dated August 20, 1976.
58. S & A Laboratory (EPA) report on water and sediment PCB data at Sangamo and surrounding area - dated August 31, 1976.

Site: _____
Break: 10-14
Other: _____

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
GREENVILLE DIVISION

UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	
)	
v.)	CIVIL NO.
)	
SANGAMO WESTON, INCORPORATED,)	
)	
Defendant.)	

COMPLAINT

The United States of America, by Mark W. Buyck, Jr., United States Attorney for the District of South Carolina, by authority of the Attorney General of the United States and acting on request of Region IV of the United States Environmental Protection Agency made pursuant to authority delegated by the Administrator of the Environmental Protection Agency, alleges that:

1. This is an action seeking civil penalties for defendant's continued violations of 33 U.S.C. 1311(a) and 33 U.S.C. 1342 relating to prohibitions and limitations on the discharge of pollutants into the waters of the United States.
2. This Court has jurisdiction of the subject matter of this action under 33 U.S.C. 1319(b) and (d) and 28 U.S.C. 1345.
3. Defendant, Sangamo Weston, Incorporated, is a corporation organized and existing under the laws of the State of Delaware. Defendant owns and operates Sangamo Electric Company located in Pickens, South Carolina.
4. Sangamo Electric Company is and has been for a number of years in the business of manufacturing electronic components and accessories at its Pickens, South Carolina, plant.
5. Town Creek is, and at all times hereinafter referred to was, "waters of the United States" within the meaning of 33 U.S.C. 1311(a) as the scope of that section is defined by 33 U.S.C. 1362(7) and (12).

6. On September 19, 1974, the Regional Administrator of Region IV of the United States Environmental Protection Agency (the "Regional Administrator") under authority of 33 U.S.C. 1342(a) and after opportunity for a public hearing, issued to Sangamo Electric Company a permit for the discharge of pollutants to Town Creek and an unnamed tributary to Twelve Mile Creek. The permit became effective on November 4, 1974, and is designated National Pollutant Discharge Elimination System ("NPDES") Permit Number SC0000141 (the "Permit").

7. The Administrator of the United States Environmental Protection Agency has the authority to issue such permits under 33 U.S.C. 1342(a) and has delegated this authority to the Regional Administrator of Region IV of the United States Environmental Protection Agency, as well as to the other Regional Administrators, in 40 C.F.R. 125.5, 38 Fed. Reg. 13530 (May 22, 1973).

8. The NPDES permit issued to Sangamo Electric Company on September 19, 1974, contains the following effluent limitations for Polychlorinated Biphenyls ("PCB's"). (The interim limits on PCB's were effective from November 4, 1974, to December 31, 1975; the final limits on PCB's became effective on January 1, 1976.):

<u>Discharge Point</u>	<u>Effluent Limitations</u>	
	<u>Daily Avg.</u>	<u>Daily Max.</u>
001 Interim	-	-
Final	-	-
002 Interim	-	-
Final	non-detectable	
003 Interim	non-detectable	
Final	non-detectable	

9. During the period of December 1974 through August 1975, Sangamo submitted monitoring reports to EPA which indicated violations of the non-detectable limit for PCB's on discharge point 003.

10. In August 1975, Sangamo combined the three discharges into one discharge point (001).

11. In a letter dated August 6, 1975, Sangamo requested that EPA modify NPDES Permit Number SC0000141 since the three discharge points were being combined into one discharge. Sangamo suggested that the effluent limitations for the different parameters for each of the three discharge points be added together to arrive at new permit limitations for the combined discharge. Sangamo did not mention PCB's in its request for modification.

12. In a letter dated August 22, 1975, EPA advised Sangamo that the new effluent limitations for the combined discharge were to be derived as Sangamo suggested; that is, by adding the effluent limitations for discharge points 002 and 003 to the limits for 001. Pursuant to the format of Sangamo's letter requesting the change, EPA also did not mention PCB's.

13. As a result of the three discharges being combined into one discharge point (001), the interim limitation for PCB's, effective through December 31, 1975, became non-detectable, and the final limitation for PCB's, which became effective on January 1, 1976, became non-detectable.

14. After August 1975 Sangamo submitted monitoring reports to EPA indicating violations of the non-detectable limits for PCB's.

15. In a letter dated May 5, 1976, EPA officially notified Sangamo of the Agency's position that the effluent limitation for PCB's on the combined discharge was non-detectable.

16. Region IV, EPA, having evidence that Sangamo was discharging in excess of the non-detectable limit on PCB's, issued on August 30, 1976, a Notice of Violation and Order (Administrative Order) (Docket No. 76-111(w)) requiring Sangamo to attain the non-detectable limit on PCB's within thirty (30) days of receipt of the Order. EPA defined non-detectable for purposes of the Order as one part per billion (1 ppb).

17. EPA has evidence that Sangamo violated the above-referenced Administrative Order by discharging PCB's in excess of one part per billion beyond the thirtieth day of receipt of the Order.

18. On October 13, 1976, EPA, Region IV, Sangamo and the State of South Carolina reached an agreement concerning NPDES Permit Number SC0000141, whereby EPA agreed to propose a modification of the PCB limitation. The new PCB limitations became effective at midnight on October 15, 1976.

WHEREFORE, the plaintiff, United States of America, prays that:

1. A civil penalty not to exceed \$10,000 per day be assessed against defendant, Sangamo Weston, Incorporated, for each day after November 4, 1974, that NPDES Permit Number SC0000141 was violated.

2. A civil penalty not to exceed \$10,000 per day be assessed against defendant, Sangamo Weston, Incorporated, for each day between October 5, 1976, and October 15, 1976, that Administrative Order Number 76-111(w) was violated.

3. That the plaintiff, United States of America, be granted such other relief as the Court deems just and proper.

Respectfully submitted,

Mark W. Buyck, Jr.
United States Attorney
Columbia, South Carolina
Attorney for the Plaintiff

By:

J. D. McCoy
Assistant United States Attorney

Site: _____
Break: 11/18/76
Other: ONE

CONFIDENTIAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV

IN THE MATTER OF)
)
SANGAMO WESTON, INCORPORATED) NPDES PERMIT No. SC0000141
(SANGAMO ELECTRIC COMPANY))

INVESTIGATION REPORT AND FINDINGS

I. INVESTIGATION REPORT.

A. Description of Permittee.

Sangamo Weston, Inc. is a corporation organized and existing under the laws of the State of Delaware. It owns and operates Sangamo Electric Company located in Pickens, South Carolina. (The records in the office of the Secretary of State's office in South Carolina indicate that Sangamo Electric Company merged with Sangamo Weston, Incorporated on September 10, 1976.) (Throughout this report the company will be referred to as "Sangamo" or "the Company.")

Sangamo manufactures electronic components and accessories at its Pickens, South Carolina, facility, specifically capacitors and mica, paper, plastic and aluminum electrolytics. The process waste discharged at the facility includes Biochemical Oxygen Demand (BOD), suspended solids (TSS), ammonia, cyanide, aluminum, copper, nickel, oil and grease, and Polychlorinated Biphenyls (PCB's). The maximum volume of effluent discharged on any particular day is approximately 1.25 million gallons per day (MGD).

The registered agent for Sangamo is C.T. Corporation System, 409 E. North Street, Greenville, South Carolina.

B. Introduction.

The case against Sangamo revolves entirely around the discharge of Polychlorinated Biphenyls (PCB's). The permit issued on September 19, 1974, contains the following limits

for PCB's. (Interim limits from November 4, 1974, to December 31, 1975; final limits from January 1, 1976.) (A copy of the permit is attached as Exhibit 1):

<u>Discharge Point</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
001 interim	-	-
001 final	-	-
002 interim	-	-
002 final	non-detectable	
003 interim	non-detectable	
003 final	non-detectable	

In August 1975 the Company combined the three discharges into one (001). The permit was not modified when the discharges were combined. (The reason for not modifying the permit will be explained later.) As a result the issue in the case is basically as follows:

Since the three discharges were combined into one discharge and the final effluent limitations are now effective (001 - -; 002, non-detectable; 003, non-detectable), what is the limitation on PCB? The Company claims that there is not a limitation on PCB and EPA claims that there is a limit and that it is non-detectable.

C. History of NPDES Permit.

1. Original application - 6/21/71 (see Exhibit 2).

Phenols - absent

Chlorinated hydrocarbons - absent

Discharge points - one (001)

2. All draft permits, fact sheets, special conditions for permit, both handwritten and typed, dated and undated, during this period (prior to April 1974) mention one discharge point (001). None of the documents mention Polychlorinated Biphenyls (PCB's). However, several of the draft permits during this period contained a phenol limit of 0 or non-detectable. (At the time

(1973 - early 1974) Region IV was advised by certain persons in our laboratory in Athens and by Headquarters personnel that PCB's would show up in the test for phenols. Thus, the reason the 0 or non-detectable limit was placed on phenols for 001 in the original drafts was to place a limit on PCB's. We were later advised by an expert on our staff that PCB's would not show up in the test for phenols.)

3. Letter from Sangamo to EPA - dated 1/15/73 (Exhibit 4). Initial application accurately describes the waste discharge. Samples were taken - system even better than original application.

4. Letter to Sangamo - dated 3/7/74 (Exhibit 5). Draft permit and public notice sent to state for review and comments.

5. Revised application - 4/22/74 (Exhibit 6). Sangamo under original application did not report several of their existing discharges.

001 - Wastewater treatment plant outfall.

002 - Cooling water outfall.

003 - North cooling water outfall.

004 - 006 - Septic tanks. (Septic tanks are not considered to be discharge points insofar as NPDES permits are concerned.)

For 001, 002, 003 - chlorinated hydrocarbons listed as present.

Following language used for 001, 002 and 003:

"Oils containing PCB are used in the manufacturing plant and could possibly be present in the discharge. No data available as to concentrations - will be available at a later date." (Emphasis added)

6. 5/9/74 - Special conditions for permit - draft, handwritten (Exhibit 7).

001 - PCB - non-detectable

002 - PCB - non-detectable

003 - PCB - non-detectable

7. Several handwritten fact sheets, draft permits, proposed conditions with no date appear in file. All mention PCB's, three discharge points (001 - 003) with a PCB limit of non-detectable, non-detectable scratched out, or no limit on PCB.

8. 5/13/74 - Meeting held with Sangamo; an attorney for Sangamo was present. Following note appears concerning meeting (Exhibit 8).

"BCB's (sic) - when toxic conditions come out, they will have to comply; can't tell what numbers will be." (It is apparent that the note was supposed to concern PCB's, not BCB's.)

9. 7/18/74 - Letter to Sangamo containing Public Notice and Fact Sheet for comments (Exhibit 9).

Proposed limits:

No limits proposed for PCB's - in fact,
PCB's are not even listed for 001, 002 or
003.

10. 9/19/74 - Permit issued PCB limits as follows (Exhibit 10).

	<u>Average</u>	<u>Maximum</u>
001 interim	-	-
final	-	-
002 interim	-	-
final	non-detectable	
003 interim	non-detectable	
final	non-detectable	

11. Discharge Monitoring Reports submitted from March to August 1975 (Exhibits 11(a), (b) and (c)) - at that time company reported PCB limit as follows:

	<u>Average</u>	<u>Maximum</u>
001	-	-
002	-	-
003	non-detectable	

12. 4/30/75 - Letter from Sangamo to EPA - company advised EPA - 002 and 003 being rerouted to 001 (Exhibit 12).

13. 8/6/75 - Letter from Sangamo to EPA (Exhibit 13). Combining to one discharge - 001. Should be completed by 8/13/75. Request modification - suggested limits - summing the values for discharges 001, 002 and 003. PCB's not mentioned.

14. 8/22/75 - Letter from John Lank, EPA, to Sangamo (Exhibit 14). Reference letter of 8/6/75. "The method of summing the effluent limitations is the method we commonly use in this type of situation, and I notice that you have already calculated the limits using this technique. You may in the future list these totals in the permit condition block of DMR and list the discharges as 001." (PCB's not mentioned.)

15. On each DMR submitted after August 1975, company reported the poundages and concentrations of PCB's in 001 and expressed the limit as - - (Exhibits 15(a), (b) and (c)). (EPA did not correct and advise the company the PCB limit for 001 was non-detectable until May 1976.)

16. 2/18/76 - Notice of Violation sent to Sangamo - NOV specified violations for pH, total suspended solids and aluminum - not PCB's (Exhibit 16).

17. 3/16/76 - Letter from South Carolina to EPA (Exhibit 17). Concerning PCB limits in permit - non-detectable on 002 and 003; no limitation on 001. Company is submitting DMR's - reporting discharge of PCB's - but indicate no limit. Appears to be a misunderstanding.

18. 5/5/76 - Letter from Lank to Sangamo - concerns PCB's (Exhibit 18).

" . . . Agency requests that you develop analytical data on PCB's in the facility intake water and also locate and identify areas within the facility where PCB's may enter the discharge stream. This report should describe abatement practices implemented in these identified areas to keep PCB's from entering the discharge."

Representatives of company - meeting on 6/15/76 - data will be used to determine what modification of the PCB parameter is necessary.

" . . . since discharges have been combined . . . ,
the DMR's indicate no permit limit for PCB's. When the discharge
limitations for each parameter are combined, the PCB non-detectable
limit remained applicable." (Emphasis added)

19. 6/15/76 - Meeting held with Sangamo's representatives.
 (See Exhibit 19 for memorandum concerning meeting.)

20. 8/13/76 - EPA and South Carolina issue advisory on eating fish caught in Lake Hartwell (Exhibit 20).

21. 8/23/76 - Show Cause letter sent to Sangamo -
 cites violation of PCB limit (Exhibit 21).

22. 8/26/76 - Show Cause meeting held.

23. 8/30/76 - Administrative Order issued by EPA
 (Exhibit 22).

24. 9/22/76 - Sangamo raises arguments against legality
 of Order (Exhibit 23).

25. 10/4/76 - Date for compliance with Administrative
 Order.

26. Sangamo files suit contesting legality of
 Administrative Order issued by EPA (Exhibit 24).

27. 10/13/76 - Meeting held with Sangamo to discuss
 Administrative Order and compliance or lack thereof. Agreement
 reached (Exhibit 25); EPA agrees to go out on Public Notice to
 propose modification of permit. (See the agreement attached
 as Exhibit 25 for details on the proposed limits on PCB's.)

D. Violations.

Sangamo has violated its NPDES permit on several occasions, including pH, total suspended solids, aluminum and polychlorinated biphenyls (PCB's). EPA believes that this action should be based only on the PCB violations. The primary reason for this belief is that the other violations are insignificant compared to the amount of PCB being discharged, and the complexity of the PCB question--whether there is or is not a limit on PCB's--would only be made more confusing if the other violations were listed. In other words, this Agency believes that the case against Sangamo should be based on the one main issue--is there a PCB limitation in NPDES Permit Number SC000141, i.e., what does a - - plus non-detectable add up to--no limit or non-detectable.

In regard to the PCB violations, EPA alleges that Sangamo violated the non-detectable limit on PCB's for discharge point 003 during the interim period (prior to January 1, 1976, and prior to the time when the three discharge points (001, 002, 003) were combined in August 1975). The evidence (Discharge Monitoring Report for December 1974 through February 1975) indicates that the Company had 26 parts per billion of PCB's in discharge point 003 prior to combining the three discharge points into one.

In addition, it is EPA's position that once the three discharge points were combined and the effluent limitations for the three separate points are added together, the limit for PCB's became non-detectable. The non-detectable limit remained effective until October 15, 1976, when EPA agreed to propose a modification of the permit. (See the agreement attached as Exhibit 25.)

Attached as exhibits are Discharge Monitoring Reports (DMR's) and other reports submitted by Sangamo (see Exhibits 15, 52, 53 and 54) and the results from our Surveillance and Analysis

Division (S & A) in Athens, Georgia (Exhibits 26(a) and (b)). Also attached as Exhibits are a series of charts showing the various data in chart form, Exhibits 27(a) - (d).

On samples split between EPA and the laboratories used by the Company, there are wide variations in analytical results. (See Exhibits 28(a) and (b).) The differences and reasons therefor are briefly explained later in this report.

E. Possible Defenses by Sangamo Electric Company.

As pointed out in a letter dated September 22, 1976, Exhibit 23, and in the Complaint filed in U. S. District Court against Russell E. Train as Administrator of EPA, and others, Exhibit 24, the company will argue that there is not a PCB limit on discharge point 001. The basis for this argument is that the original permit issued in September 1974 (Exhibit 1) contained three discharge points: 001, 002 and 003. The final effluent limitation for PCB's, which became effective on January 1, 1976, are as follows:

	<u>Daily Avg.</u>	<u>Daily Max.</u>
001 -	-	-
002 -	non-detectable	
003 -	non-detectable	

In August 1975 the Company advised EPA that the three discharges had been combined into 001 (Exhibit 13). The Company requested a modification of the permit and suggested that the limits at the three discharge points be added together for a new limit on 001. The Company did not mention PCB's. EPA, in response to that letter in August 1975 (Exhibit 14), advised the Company that EPA would not modify the permit, but that the Company's procedure in adding up the separate effluent limitations for the three discharge points into one total figure was the correct procedure and to use these new figures as the effluent limitations for their Discharge Monitoring Reports. EPA also did not mention the PCB limitation. Thus, the main

question is what is the total of a - - plus two non-detectables. Does it equal, as EPA alleges, non-detectable; or does it equal, as the Company alleges, no limit at all on PCB's?

Possible arguments which may be used by Sangamo:

1. The obvious argument, as illustrated above, is that when you add no limitation with two non-detectables, you get no limitation. In other words, the Company will argue that there is no limitation on PCB's in their NPDES permit; thus, they can discharge up to, let's say, a million pounds a day of PCB's and it would not be in violation of the permit.

2. The Company will argue that if one reviews the history of the NPDES permit from the day they submitted their original application in 1971 to the present date, it is apparent that EPA did not intend to put a PCB limit on their process water, which is discharge point 001, and there is not such a limit today.

For example, if one reviews the history of the drafting of the NPDES permit, he would find, as stated before, the following information:

The Company submitted a revised application for an NPDES permit in April 1974 (Exhibit 6). In the revised application the Company advised EPA that they had six discharge points and not the previous one they had mentioned in their original application. The discharge points are as follows: 001, wastewater treatment plant outfall; 002, cooling water outfall; 003, north cooling water outfall; 004 - 006, septic tanks (not considered to be discharge points by EPA--not to surface waters). The Company advised EPA in their revised application that they used PCB's in their manufacturing plant and that it could possibly be present in discharge points 001 - 003; however, they had no data to prove this. Once the data was available, the Company would give it to EPA.

The file indicates that on May 9, 1974, Mike Donehoo, EPA, drafted the special conditions to be included in the Sangamo permit (Exhibit 7). They were as follows: for 001, 002 and 003 the PCB limitation would be non-detectable on all three discharge points. However, in a meeting held on May 13, 1974, Mike Donehoo indicates, "BCB's (sic) when toxic conditions come out, they will have to comply; can't tell what numbers will be." (Exhibit 8.) It appears from this note of the meeting held on May 13, 1974, that EPA and the Company agreed that the Company would have to meet the PCB limit in the toxic standards when they were promulgated. Secondly, until that time no one knew what the PCB limits should be in the permit. Therefore, there should not be a PCB limit in the permit at all. This appears to be confirmed by the letter sent to Sangamo from EPA on July 18, 1974 (Exhibit 9), which contained the public notice and fact sheet for their review and comments. There was no mention of PCB's in the fact sheet which was attached to the July 18, 1974, letter; thus, the impression one gets from reading the note on the meeting held on May 13, 1974, appears to be correct--that is, there was no intent to put a PCB limit in the final permit. (John Lank, State Group Chief, disagrees with this analysis and says the note only meant that when toxic standards were promulgated the Company would have to meet them if they were more stringent than permit conditions.) However, when the final permit was issued on September 19, 1974, it mentioned PCB's (Exhibit 1).

	<u>Average</u>	<u>Maximum</u>
001 interim	-	-
final	-	-
002 interim	-	-
final		non-detectable
003 interim		non-detectable
final		non-detectable

X
Thus, when one reviews the permit as it was finally issued on September 19, 1974, it appears that EPA changed its mind and decided to put a limitation on PCB's. However, there is a fallacy to this argument. For example, if one looks at the chart above, it will be noted that the PCB limit on 001, interim and final, is - - and on 002 interim is - -. However, the final PCB limitation on 002 is non-detectable; and on 003 interim and final are non-detectable. This does not make any sense. For example, if one wanted to put a PCB limit on Sangamo Electric Company, it would appear they would have placed it on the process waste, which is 001. However, there is no limit on PCB's for 001. The non-detectable limit is only on the final limitation on one cooling tower and interim and final on the other cooling tower, which could not contain much, if any, PCB's in the first place. If EPA intended to put a PCB limit on the discharge of Sangamo, it is apparent that it should have been included on 001, which would have contained the most PCB's.

The plot thickens, however, when one reviews the history of the NPDES permit after it was issued. Sangamo Electric Company submitted Discharge Monitoring Reports as required by the permit in March 1975 (Exhibits 11(a), (b), (c)). At that time the Company reported the PCB limitation as follows. (Remember these are the interim limitations for PCB's.) For 001 the Company reported that the limitation for average and maximum was - -. The same was reported for 002. For 003 the Company reported non-detectable. These are exactly the limitations reflected in the permit.

In April 1975 the Company advised EPA that the discharge points 002 and 003 would be rerouted and connected to 001 (Exhibit 12). On August 6, 1975, the Company advised EPA that they were in fact combining the three discharges into 001 and it should be completed by August 13, 1975 (Exhibit 13). At this time the Company requested a modification and suggested

that the new effluent limitations for their facility be determined by adding up the separate limitations for the three discharge points and come out with a new total. The Company did not mention PCB's.

In a letter dated August 22, 1975, EPA responded to Sangamo's letter (Exhibit 14). EPA said the method of summing the effluent limitations is a method we commonly use in this type of situation and since the Company has already done so, they should report the new limits in their Discharge Monitoring Reports. EPA also did not mention the PCB's. Thereafter, the Company in their Discharge Monitoring Reports reported the poundages and concentrations of PCB's in 001 and expressed the limitations as - - (Exhibits 15(a), (b), (c)). EPA did not correct nor advise the Company that the PCB limitation for 001 was non-detectable; nor did EPA circle the analytical results reported by the Company as being violations of the NPDES permit, which is the standard operating procedure.

Thus, it appears that either (1) EPA did not review the permit at the time the DMR's were received and verify the limitation on PCB's; or (2) the representative of EPA who reviewed the Discharge Monitoring Reports believed that there was not a limitation on PCB's on 001. In any event, it may be hard for X EPA to argue today that the PCB limitation for 001 was non-detectable.

In addition, on February 18, 1976, EPA sent a notice of violation to the Company specifying violations for pH, total suspended solids and aluminum (Exhibit 16). PCB's were not mentioned. Thus, again it appears that EPA did not believe X there was a non-detectable limit on PCB's for 001.

It was not until EPA received a letter from the State of South Carolina, dated March 16, 1976 (Exhibit 17), indicating there may be a problem on the PCB limit in the permit for Sangamo, that EPA finally focused on the problem. (While there is not

any documentation in the file, John Lank, State Group Chief, remembers receiving a telephone call around this period in which Sangamo advised him that the Company had evidence indicating there were PCB's in their intake water, which was one reason there were still PCB's being discharged in their effluent.) Then in a letter dated May 5, 1976, Mr. John Lank, EPA, advised Sangamo Electric Company to develop all the information they had on PCB's and to submit this report to EPA in a meeting to be held on June 15, 1976 (Exhibit 18). Mr. Lank advised the Company that the data would be used to determine what modification of the PCB parameter was necessary. He also advised the Company that since the discharges have been combined the Company had been reporting no permit limit for PCB's. "When the discharge limitations for each parameter are combined, the PCB non-detectable limit remained applicable." Thus, for the first time EPA advised the Company on May 5, 1976, that in the Agency's opinion the PCB limitation for Sangamo was non-detectable.

X Thus, the Company could argue that when EPA issued the final NPDES permit in September 1974, it either (1) never intended to put a PCB limitation on 001, which is the process water; or (2) EPA intended to put a PCB limit in the permit but completely blew it. If a court holds the government to a strict standard of accountability, the result will probably be that the court will find there is not a PCB limit for 001 in the NPDES permit. However, as will be explained later, the court may decide not to go behind the permit and look at the past history but instead review the permit as it was issued.

3. In mitigation, the Company will argue that the PCB compound in use today at Sangamo is called Aroclor 1016 and that it is biodegradable and not as harmful as Aroclor 1242 which the Company used until 1972. (See "Proposed Toxic Pollutant Effluent Standards for Polychlorinated Biphenyls," 41 Fed. Reg. 30468 - 30477, July 23, 1976, (copy attached as Exhibit 29) for a rather thorough discussion of PCB's--toxicity, origin, etc.)

Briefly, PCB's are very stable compounds and have a very long half-life in the environment. Environmentalists are concerned about the tendency of the chlorinated hydrocarbons with long half-lives to continue to build up because the rate of release to the environment exceeds the rate of destruction, thus the potential for limitless accumulation.

While the 1016 is biodegradable to an extent and 1242 is not, the rate of release of 1016 to the environment exceeds the rate of degradation; therefore, the 1016 material will still continue to accumulate in nature.

F. Arguments Which Can Be Used By EPA.

1. It appears that the best course of action for the Environmental Protection Agency and for the government, if this case is filed in District Court, would be to argue that the permit stands by itself and that the court should not look at the history behind it. It may be better to argue before a court that when you add a - - and two non-detectables, you get the tighter limit as a result, which would be non-detectable. The argument is, of course, that EPA intended to put a limitation on PCB's. Thus, when three separate limitations are added, you must insure that there is at least a limitation on PCB's. The only limitation mentioned in the permit, as issued, is non-detectable. Thus, when the three numbers are combined, non-detectable is the obvious result. Or stated another way, where effluent limitations are placed on a parameter (example, PCB's) which is being discharged through separate discharge pipes, the resultant limit of a combination of these pipes should be equal to the sum of the limits. Where a condition requires the placing of a non-detectable limit on a pipe, the combination of that pipe with any series of pipes does not remove the condition or reason for placing that particular limit on that particular volume of waste. EPA holds that any combination of discharges, among which there is at least one non-detectable limit, requires a non-detectable limit on the resultant discharge.

Since the Company had ninety days from the date they received the permit to request an adjudicatory hearing or to file an action with the Court of Appeals, neither of which were done, the permit stands as issued. Why it was written the way it was--what EPA intended--is really of no consequence at this time.

X While this argument is tenuous at best, it may be the only argument EPA has. For example, if one looks behind the permit at the history of it and holds the government to a strict standard of accountability for its actions, there may be little chance for the government to prevail in any type of civil action.

2. The final effluent limitations on PCB's became effective on January 1, 1976. In May 1976 EPA advised the Company of its position, i.e., that the PCB limitation for Sangamo Electric Company was non-detectable. It can be argued that at least from May 1976 the Company was advised of EPA's position and was on notice. It did not raise any objections at that time and as far as the file indicates, the Company did not raise any objections in the meeting held in June 1976. It was not until a show cause meeting was held on August 29, 1976, that the Company first raised its argument that there was not a PCB limitation in the permit. A court may buy the argument that once the Company was on notice in May 1976 and did not raise any objections until August 1976, at least from the date in May when they received notice, the limitation in the permit was in fact non-detectable and that any results above non-detectable after that date would be a violation of the permit.

3. While "non-detectable" is not defined in the permit, it was defined in an Administrative Order issued on August 31, 1976. At that time EPA defined "non-detectable" insofar as the Order was concerned as one part per billion. This definition was derived from a policy letter from EPA Headquarters dated

March 19, 1976, in which headquarters advised the regions that as of July 1, 1977, the PCB limit on any NPDES permit should be zero, which would be defined as one part per billion (Exhibit 30).

There is strong argument that one part per billion is too lenient and that the PCB's in a discharge can be detected at approximately 50 parts per trillion or .050 micrograms per liter.

If a court accepted the argument that the limitation for PCB's was non-detectable, there should be no problem in proving that the Company violated that particular limit. I believe the legal definition of non-detectable would be that if one can find it, it is detectable and thus a violation of the non-detectable limit.

While this case has some weak points, it is EPA's position that the case should be filed with the U. S. District Court. The reasons are many, including that while the harm of PCB's has not been conclusively proven, and there is disagreement in scientific circles as to whether or not PCB's do in fact cause cancer, it is apparent that PCB's are, in fact, of grave concern to the Environmental Protection Agency and to the country at large. In fact, EPA was so concerned about the PCB levels contained in the fish caught in Lake Hartwell that on August 13, 1976, Region IV of the Environmental Protection Agency, in concurrence with the State of South Carolina, issued an advisory on Lake Hartwell, into which Sangamo's discharge eventually empties, that fish caught in Lake Hartwell should not be eaten (Exhibit 20). This advisory had a drastic effect on the fishing in Lake Hartwell and, as a consequence, a rather severe economic impact was felt in the Lake Hartwell area. The public itself is very concerned. One evidence of this is a \$1 billion lawsuit filed against Sangamo Electric Company by the property owners on Lake Hartwell. In addition, the Environmental Protection Agency has filed many cases in the past couple of years for

violation of NPDES permits. Many of these cases were for violations of BOD, suspended solids, compliance schedule violations, etc. The environmental harm in most of these cases was very little. Therefore, how can EPA and the government not file a case in which there appears to be grave environmental damage. Thus, no matter how weak the case may be, EPA feels that the case must be referred to the U. S. Attorney and it should be filed by his office.

G. The Final NPDES Permit and How It Was Derived.

After a thorough review of the file, it is my opinion, reviewing only the documents themselves, that the PCB limitation in the final permit was not intended the way it was written. For example, when the Company submitted the revised application in April 1974 (Exhibit 6), for the very first time it mentioned that it might have PCB's in its discharge. Immediately after receiving that application on May 9, 1974, it appears that EPA intended to put a non-detectable limit on PCB's for 001, 002 and 003 (see Exhibit 7). Then the meeting was held on May 13, 1974, in which it appears that EPA, in agreement with the Company, decided that there should not be a PCB limit at all in the permit, but instead when the toxic standards under Section 307 of the Act were promulgated, the Company would be required to comply with those standards. (John Lank, State Group Chief for South Carolina, however, says the note concerning PCB's in the May 13 meeting merely means that the Company would have to meet the toxic standards when they are promulgated, if they are more stringent than the non-detectable limit which EPA intended to place in the permit.) (See Exhibit 8.) Then the final permit was issued which contained the hodgepodge of PCB limitations (Exhibit 1).

If one reviews the file carefully, he will find a draft permit or worksheet (Exhibit 31) which originally contained non-detectable limitation on PCB's for 001, 002 and 003, both interim and final limitations--that is, a non-detectable limit

on PCB's, interim and final, on all three discharge points. However, the non-detectable limits were crossed out for the interim and final limitation on 001 and for the interim on 002. The PCB limitation for the final limitation for 002 and the interim and final for 003 are not crossed out. Thus, whoever typed the final permit probably took this particular worksheet and typed the final permit. When the final permit was reviewed, the mistake was not caught and the permit was issued. If this were the case, it explains why the final permit as issued does not make a lot of sense.

The normal course of action would have been to give to the secretary who typed the final permit a new revised draft permit with the correct information on it, instead of using an old one on which certain parts were scratched out. If EPA intended to put a non-detectable limit on PCB's on the final effluent limitations for 001, 002 and 003, it would then have three of the six non-detectable terms used on the original worksheet; i.e., it would not have placed a limit on the interim conditions but would have placed a non-detectable limit on the final conditions for all three discharge points. If someone scratched out the wrong three non-detectable connotations in the permit, it could very well have ended up with the final permit as issued. It appears obvious that EPA did not intend for the effluent limitations for PCB's to be as they appear in the final permit. In any event, we must take the case as it is.

Having discussed the case with John Lank, who is the State Group Chief for South Carolina, it appears that EPA intended to control PCB's from the outset (1) by placing a 0 or non-detectable limit on phenols in the original draft permits and (2) by placing a non-detectable limit on PCB's on all three discharge points after the revised application was submitted in April 1974. When the permit was prepared in final form, however, a mistake was made and not caught.

H. Differences in Analytical Results Among Different Laboratories.

If one reviews the analytical results of the different laboratories (for Sangamo--Stewart Laboratories and Galbraith Laboratories; for EPA--Surveillance and Analysis Division (S & A) of EPA, State of South Carolina, EPA laboratory in Cincinnati, Ohio), he will find that the analytical results are widely different, with the two laboratories for the Company, Stewart and Galbraith, being consistently lower than the others. Some of the variation in results were from split samples; others were from samples taken at different times and/or places. (See Exhibit 28(a) and (b) for a comparison of the data and the chart prepared from the data which is attached as Exhibit 27(d).)

The reasons for the difference in analytical results can be several, including the following:

1. Skill of the chemist analyzing the sample.
2. Efficiency of the extraction technique used to remove the desired material from the water. (Example: In some cases a longer period of rapid shaking may be necessary because the formation of bubbles prevents mixing, than in a slow rocking process which quickly changes the contact surface between the two liquids.)

3. In the actual testing of the sample, one electron capture detector could be operated in its linear response range while a second electron capture detector may be non-linear. This means that the quantity measured may appear smaller than it really is. (If a more detailed explanation is necessary, please contact Ronald T. Allen at 285-3506 (FTS).)

Jim Finger, the Director of the EPA laboratory in Athens, Georgia, has checked and verified the method used by the EPA laboratory and is convinced that the EPA results, which are substantially higher than the results from the Company's laboratories, are correct.

In any event, it may not make any difference. It is pretty certain that the results of the two Sangamo laboratories are the minimum results and the actual figures are probably somewhat higher. Since the Sangamo results are the minimum and their results are higher than the one part per billion (1 ppb) level of detectability set by EPA in the Administrative Order, the Company is in violation of the non-detectable limit by their own data.

I. List of Primary Witnesses.

1. John Lank, United States Environmental Protection Agency, 345 Courtland Street, NE, Atlanta, Georgia 30308 (404/526-3971) (FTS: 285-3971).

State Coordinator for the State of South Carolina. Responsible for the drafting of the subject NPDES permit and compliance therewith after permit was issued.

2. William E. (Mike) Donehoo, United States Environmental Protection Agency, 345 Courtland Street, NE, Atlanta, Georgia 30308 (404/526-5901) (FTS: 285-5901).

Actually drafted subject NPDES permit following guidance of John Lank.

3. Ralph Jennings, United States Environmental Protection Agency, 345 Courtland Street, NE, Atlanta, Georgia 30308 (404/526-3971) (FTS: 285-3971).

Environmental Specialist - expert on Polychlorinated Biphenyls (PCB's).

4. James H. Finger, Director, Surveillance and Analysis Division (S & A), United States Environmental Protection Agency, College Road, Athens, Georgia 30601 (404/546-3136) (FTS: 289-3136).

In charge of EPA monitoring program at Sangamo. Expert chemist. Can testify as to the suspected cause in the different analytical results obtained by the different laboratories on split samples.

5. E. William Loy, Jr., Chemist, Surveillance and Analysis Division (S & A), United States Environmental Protection Agency, College Road, Athens, Georgia 30601 (404/546-3165) (FTS: 289-3165).

Supervised the actual analysis program conducted by EPA. Can testify to the procedures used by EPA in analysis of samples taken at Sangamo.

6. Hugh C. Vick, Thomas J. Sack, Rick Rheem, Mark Koenig, Rod Davis and Steve Hall, Surveillance and Analysis Division (S & A), United States Environmental Protection Agency, College Road, Athens, Georgia 30601 (404/546-3165) (FTS: 289-3165).

These people took the actual samples of effluent at Sangamo which were analyzed for PCB's. They can testify to the procedures used in the taking of the samples, how the samples were split between the Company and EPA (if they were), and how the samples were preserved.

7. Jules C. Hydrick, Group Vice President, Sangamo Electric Company, Post Office Box 128, Pickens, South Carolina 29671 (803/878-6311).

Mr. Hydrick, Vice President of Sangamo, would be an adverse witness; however, he would be able to testify concerning the PCB's being discharged at Sangamo, efforts being made to eliminate the PCB's, and other related facts.

8. Jessie L. Butner, Manufacturing Service Manager, Sangamo Electric Company, Post Office Box 128, Pickens, South Carolina 29671 (803/878-6311).

Basically the same testimony as Mr. Hydrick.

Other witness, names unknown at this time, would be called from the State of South Carolina, Davis & Floyd Engineers, Stewart and Galbraith laboratories in Knoxville, Tennessee.

J. Certification.

I certify the above facts to be true to the best of my knowledge.

Date November 10, 1976

Ronald T. Allen
Ronald T. Allen
Attorney
Legal Support Branch
Enforcement Division

II. FINDINGS OF THE REGIONAL ADMINISTRATOR.

Based on the foregoing and as required by Section 309(a)(3) of the Federal Water Pollution Control Act, as amended (the "Act"), 33 U.S.C. 1319(a)(3), I hereby make the following findings:

1. Town Creek is a navigable water as defined by Section 502(7) of the Act, 33 U.S.C. 1362(7).

2. The discharge of Sangamo Weston into Town Creek at the point of discharge is a "discharge of a pollutant" as defined in Section 502(12) of the Act, 33 U.S.C. 1362(12), and as such, is prohibited by Section 301(a) of the Act, 33 U.S.C. 1311(a), unless in compliance with a permit issued pursuant to Section 402 of the Act, 33 U.S.C. 1342.

3. NPDES Permit Number SC0000141 (the "Permit") was validly issued to Sangamo Electric Company on September 19, 1974, under Section 402(a) of the Act, 33 U.S.C. 1342(a), and power delegated under 40 C.F.R. 125.5, 38 Fed. Reg. 13530 (May 22, 1973). In September 1976 Sangamo Electric Company was merged into Sangamo Weston, Incorporated, and is now owned and operated by Sangamo Weston.

4. The NPDES permit issued to Sangamo on September 19, 1974, contained the following effluent limitation for Polychlorinated Biphenyls (PCB's). (The interim limits were effective from November 4, 1974, to December 31, 1975; the final limits on PCB's became effective on January 1, 1976.)

<u>Discharge Point</u>	<u>Effluent Limitation</u>	
	<u>Daily Avg.</u>	<u>Daily Max.</u>
001 Interim	-	-
Final	-	-
002 Interim	-	-
Final	non-detectable	
003 Interim	non-detectable	
Final	non-detectable	

5. That by failing to appeal issuance of the permit by requesting an adjudicatory hearing within ten (10) days after public notice of the proposed issuance of the permit, as provided in 40 CFR 125.36(b), 39 Fed. Reg. 27081 (July 24, 1974), Sangamo failed to avail itself of the opportunity for administrative review of the permit and as a consequence, as provided in Section 509(b)(2) of the Act, 33 U.S.C. 1369(b)(2), the Permit is not now subject to judicial review in any civil or criminal enforcement proceeding.

6. Sangamo submitted Discharge Monitoring Reports for the period of December 1974 through August 1975 which indicate violations of the non-detectable limit for PCB's for discharge point number 003.

7. In August 1975 Sangamo combined the three discharge points into one (001). As a result the effluent limitation for PCB's for the one remaining discharge point became "non-detectable."

8. Sangamo has been submitting Discharge Monitoring Reports since August 1975 which show violations of the non-detectable limit on PCB's.

9. On August 31, 1976, Region IV, EPA, issued an Administrative Order to Sangamo (see Exhibit 22) requiring the Company to reach the non-detectable limit for PCB's within thirty days of receipt of the Order. "Non-detectable" was defined for purposes of the Order as one part per billion. Analytical results from both EPA sources and the Company's sources indicate violations of the Administrative Order; however, the amount of PCB's in the effluent was apparently decreasing and approaching the one part per billion figure. As a result of the efforts made by Sangamo and the decrease in the amount of PCB's being discharged into Town Creek, Region IV, EPA, the State of South Carolina, and Sangamo entered into an agreement (a copy is attached as Exhibit 25) whereby EPA agreed to propose a modification of the Company's NPDES permit, specifically the PCB effluent limitation.

10. Sangamo, by violating the PCB limitation on discharge point 003 from December 1974 to August 1975 and on discharge point 001 from August 1975 to October 15, 1976, violated Part I(A)(2) of the Permit.

11. Sangamo, by failing to achieve compliance with the final effluent limitation on PCB's by October 4, 1976, violated Notice of Violation and Order (Administrative Order) (Docket No. 76-111(w)) issued pursuant to Section 309(a)(3) of the Act, 33 U.S.C. 1319(a)(3).

12. So long as Sangamo continues to discharge pollutants into Town Creek it continues to be subject to the limitations of the permit.

13. By discharging pollutants into Town Creek while not in compliance with its Permit, Sangamo violated Section 301(a) of the Act, 33 U.S.C. 1311(a).

14. By violating the provisions of the Permit, Sangamo is subject to a civil penalty not to exceed \$10,000 per day of such violation under Section 309(d) of the Act, 33 U.S.C. 1319(d).

Date _____

JACK E. RAVAN
Regional Administrator

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

STATE
COPYFORM APPROVED
OMB NO. 49-R 0408

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

SECTION 1. GENERAL INFORMATION

1. State	Application Number (to be assigned by Corps of Engineers)		
S.C.	074 OYN	2	00006
	Div.	Dist.	Type
			Sequence No.

2. Name of applicant and title of signing official Sangamo Electric Co., Capacitor Division, Pickens Plant
Mr. J. C. Hydrick, Vice President & General Manager

3. Mailing address of applicant
Sangamo Electric Company
11th and Converse Streets
P. O. Box 3347
Springfield, Illinois 62708

4. Name, address, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.
H. Robert Asmus, Industrial Relations Manager, Sangamo Electric Co.
P. O. Box 128
Pickens, S. C. 29671
Phone 878-6311 (Area Code 803) Ext. 275

NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form.

Required Information

- All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged information.
- The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application.
- If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply.
- Drawings required by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 of Section II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

Fees

If any discharge or deposit is involved, an application fee of \$100 must be submitted with this application. An additional \$50 is required for each additional point of discharge or deposit.

Signature

- If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor. Other signature requirements are discussed in the pamphlet.
- If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

J. C. Hydrick
 Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

FOR CORPS OF ENGINEERS USE ONLY

Acronym name of applicant

SANGAMO ELECTRIC CO.

Are discharge structures

Major? ☐Minor? ☐N/A? ☒

Date received, form not complete

23 JUN 71Date received, form complete
but without certificate

Date received, form complete

Date of Cert./Ltr.

day mo yr

Date sent to EPA, form not complete

Date sent to EPA, NOAA, D/I, AEC,

FPC in complete form

day mo yr

5. Date <u>6</u> <u>21</u> <u>71</u> mo day yr	(Office use only) <div style="text-align: right;">074 OYN 000036</div>
6. Check type of application: a. Original <input checked="" type="checkbox"/> b. Revision <input type="checkbox"/>	7. Number of original application
8. Name of facility where discharge or construction will occur. <div style="text-align: center;"> <u>Sangamo Electric Company, Capacitor Division, Pickens Plant</u> <u>Pickens, South Carolina</u> </div>	
9. Full mailing address of facility named in item 8 above. <div style="text-align: center;"> <u>P. O. Box 128</u> <u>Pickens, South Carolina 29671</u> </div>	
10. Names and mailing addresses of all adjoining property owners whose property also adjoins the waterway. <div style="text-align: center;"> <u>A. J. Reece Estate - Executor, Ray W. Reece</u> <u>329 Reece Mill Road</u> <u>Pickens, S. C. 29671</u> </div>	
11. Check to indicate the nature of the proposed activity: a. Dredging <input type="checkbox"/> b. Construction <input type="checkbox"/> c. Construction with Discharge <input type="checkbox"/> d. Discharge only <input checked="" type="checkbox"/>	
12. If activity is temporary in nature, estimate its duration in months. <div style="text-align: center;">N/A</div>	
If application is for a discharge:	
13. List intake sources	
Source	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal or private water supply system	0 1 - 2 56 mgd.
Surface water body	— — — — —
Ground water	— — — — —
Other	— — — — —
14. Describe water usage within the plant	
Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Cooling water	— — — — 0 3 10 mgd
Boiler Feed water	— — — — 0 0 20 "
Process water	— — — — 0 9 00 "
Sanitary system*	— — — — 0 0 26 "
Other	— — — — —
15. List volume of discharges or losses other than into navigable waters.	
Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal waste treatment system	— — — — —
Surface containment	— — — — —
Underground disposal	— — — — 0 0 26 Mgd
Waste Acceptance firms	— — — — —
Evaporation	— — — — —
Consumption	— — — — —
* Indicate number employees served per day 900 Avg.	

If structures exist, or dredging, filling or other construction will occur, the precise location of the activity must be described.

(Office use only)

074 OYN

000026

- a. Name the corporate boundaries within which the structures exist or the activity will occur.

16. State
South Carolina

17. County
Pickens

18. City or Town
Near Town of Pickens

- b. Name of waterway at the location of the activity

19. Town Creek

20. Maps and sketches which show the location and character of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. For construction or work in navigable waters for which a separate permit is sought under 33 U.S.C. 403, the character of each structure must be fully shown on detailed plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted. N/A

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document	Id. No.	Date	Issuing Agency
* Pollution Control Construction Permit	#1291	10-9-68	S. C. Pollution Control Authority
* Inspection Letter	Ref. #1291	11-25-70	S. C. Pollution Control Authority

Copies attached - Also see additional information sheet.

23. Check if facility existed or was lawfully under construction prior to April 3, 1970.



24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

N/A

25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids which may be deposited and to determine its effect upon the waterway.

The average rate of discharge (1.229 mgd) was determined by the total amount of water purchased during the full year of 1970. The amount of suspended solids was determined by "Standard Methods" 12th. edition as 42 ppm. On this basis calculated discharge of suspended solids is 433 lbs./day. The solids are expected to remain in suspension temporarily but will settle eventually.

26. State rates and periods of deposition described in Item 25.

Discharge is continuous - 7 days per week at a rate of 433 lbs./day.

1. Discharge described below is a. Present <input checked="" type="checkbox"/> b. Proposed or changed <input type="checkbox"/>	
Name of corporate boundaries within State 3. <u>S. C.</u>	
State the precise location of the point 7. Latitude <u>34</u> Degree 8. Longitude <u>82</u> Degree	
10. Has application for water quality Date <u>6</u> <u>16</u> mo day	
11. Narrative description of activity <u>SIC #3679</u> <u>Specific -</u> <u>Aluminum E</u>	
12. Standard industrial classification no. <u>3679</u>	
15. Principal raw material <u></u>	
18. Average gallons per batch discharge <u>N/A</u>	
21. Describe waste abatement practices. <u>Waste water</u> <u>for pH control</u> <u>solids are</u> <u>aerated</u>	

PROCESS AND DISCHARGE DESCRIPTION	
Registration File <u>N/A</u> <input type="checkbox"/>	(Office use only) <u>074 OYN</u> 000036
Discharge is located, County <u>Pickens</u>	6. Discharge Serial No. <u>001</u>
5. <u>Near Town of Pickens</u>	
9. Name of waterway at the point of discharge. <u>Town Creek</u>	
Has an impact been made? If so, give date: If certificate attached to form <input type="checkbox"/> Name Issuing Agency <u>S. C. Pollution Control</u> <u>Authority</u>	
13. (List Standard Industrial Classification, and specific manufacturing process). <u>Components and Accessories N.E.C.</u> <u>Capacitors - Mica, Paper, Plastic and</u>	
14. Amount of principal product produced per day. <u>150,000</u> per day <u>pieces</u>	
17. Number of batch discharges per day. <u>Continuous</u>	
16. Principal product. <u>Capacitors, Mica,</u> <u>Paper, Plastic,</u> <u>Aluminum Electrolytic</u>	18. Amount of principal raw material consumed per day. <u></u>
19. Discharge began. <u></u>	20. Date discharge will begin. <u></u> <u></u> <u></u> mo day yr
21. Additional information <u></u> <u></u> <u></u> mo day yr	
22. Describe waste abatement practices. <u>passed through a trap into a neutralization chamber</u> <u>into 24 hour equalization basin where oils and</u> <u>colled flow into a lagoon with 5 day retention</u> <u>chemical aerators.</u>	

PHYSICAL DESCRIPTION OF INTAKE WATER AND DISCHARGE

Intake		Discharge			(Office use only)		
Parameter and Code	UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	Discharge Serial No.
							001
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Flow (Gallons per day) 00056	1.256	NA	1.229 MGD	0.996	1.287	OTHR	REC
pH 00400	6.8	NA	6.7	3.4	8.1	D	A
Temperature (Winter) (°F) 74028	Winter temperature not available						
Temperature (Summer) (°F) 74027	23	NA	26				

23.

DISCHARGE CONTENTS

PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT
Color 00080		X	Aluminum 01105	X		Nickel 01067	X	
Turbidity 00070		X	Antimony 01097		X	Selenium 01147		X
Radioactivity 74050		X	Arsenic 01002		X	Silver 01077		X
Hardness 00900		X	Beryllium 01012		X	Potassium 00937		X
Solids 00500	X		Barium 01007		X	Sodium 00929	X	
Ammonia 00510	X		Boron 01022		X	Titanium 01152		X
Organic Nitrogen 00505	X		Cadmium 01027		X	Tin 01102		X
Nitrate 00620	X		Calcium 00916		X	Zinc 01092		X
Nitrite 00615		X	Cobalt 01037		X	Algicides 74051		X
Phosphorus 00665	X		Chromium 01034	X		Oil and Grease 00550	X	
Sulfate 00945	X		Copper 01042	X		Phenols 32730		X
Sulfide 00745		X	Iron 01045	X		Surfactants 33260		X
Sulfite 00740		X	Lead 01051		X	Chlorinated Hydrocarbons 74052		X
Bromide 71870		X	Magnesium 00927		X	Pesticides 74053		X
Chloride 00340	X		Manganese 01055		X	Fecal Streptococci Bacteria 74054		X
Cyanide 00720	X		Mercury 71900		X	Coliform Bacteria 74056		X
Fluoride 00951		X	Molybdenum 01062					

24. All known hazardous or potential hazardous substances in your plant been inventoried:

☒ Yes

☐ No

24b. If yes, have steps been taken to insure that there exists no possibility of any such known hazardous or potentially hazardous substance entering this discharge?

☒ Yes

☐ No

25. Remarks.

Our business is seasonal. Daily average in column 2, is based on one calendar year. Column 4 is based on the minimum quarterly usage. Column 5 is based on the maximum quarterly usage. All figures are based on actual consumption in 1970.

The information above completes the basic reporting requirements which are required of all applicants. Those applicants whose discharge results from an activity included within any of the Standard Industrial Classification Code (SIC Code) categories listed below must complete Part A of this form as well.

CRITICAL INDUSTRIAL GROUPS

SIC 098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC 285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC 10-14	DIVISION B - MINING	SIC 2871	FERTILIZERS
SIC 201	MEAT PRODUCTS	SIC 2879	AGRICULTURAL PESTICIDES, AND OTHER AGRICULTURAL CHEMICALS, NOT ELSEWHERE CLASSIFIED
SIC 202	DAIRY PRODUCTS	SIC 2891	ADHESIVES AND GELATIN
SIC 203	CANNED PRESERVED FRUITS, VEGETABLES (EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC 2892	EXPLOSIVES
SIC 2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND SEAFOODS	SIC 29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC 204	GRAIN MILL PRODUCTS	SIC 3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC 206	SUGAR	SIC 3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC 207	CONFECTIONARY AND RELATED PRODUCTS	SIC 311	LEATHER TANNING AND FINISHING
SIC 208	BEVERAGES	SIC 32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC 209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC 331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC 22	TEXTILE MILL PRODUCTS	SIC 332	IRON AND STEEL FOUNDRIES
SIC 23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC 333, 334	PRIMARY SMELTING AND REFINING OF NON-FERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC 242	SAWMILLS AND PLANING MILLS	SIC 336	NONFERROUS FOUNDRIES
SIC 2432	VENEER AND PLYWOOD	SIC 347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC 2491	WOOD PRESERVING	SIC 35	MACHINERY, EXCEPT ELECTRICAL
SIC 26	PAPER AND ALLIED PRODUCTS	(SIC 36)	ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES
SIC 281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)	SIC 37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC 2818	INDUSTRIAL ORGANIC CHEMICALS	SIC 3731	SHIP BUILDING AND REPAIRING
SIC 282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	(SIC 491)	ELECTRIC COMPANIES AND SYSTEMS
SIC 283	DRUGS	SIC 493	COMBINATION COMPANIES AND SYSTEMS
SIC 284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS		

PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

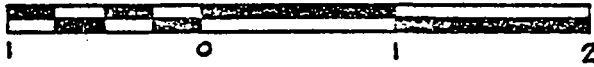
(Office use only)

Discharge Serial No.
001

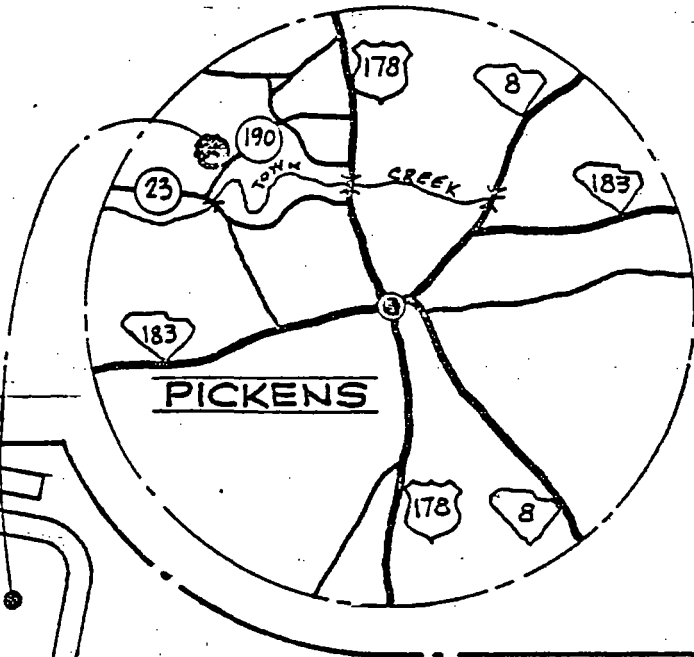
INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

Intake	Discharge											
	(1) DAILY AVG. CONCENTRATION	(2) MAXIMUM CONCENTRATION	(3) MAXIMUM POUNDS PER PROCESS UNIT	(4) MAXIMUM POUNDS PER DAY	(5) DAILY AVG. CONCENTRATION	(6) AVERAGE POUNDS PER DAY	(7) SAMPLE TYPE	(8) SAMPLE FREQUENCY	(9) METHOD OF ANALYSIS	(10) CONTINUOUS MONITORING		
PARAMETER AND CODE												
ALKALINITY (as Ca CO ₃) 00410	4	NA	17.6	189	189	16	165	Comp.		Stand. Methods 12th Ed.	ABS	
B.O.D. 5-DAY 00310	1	NA	7.7	82	82	7	72	"		"	"	
CHEMICAL OXYGEN DEMAND (C.O.D.) 00340	10	NA	81.4	874	874	74	763	"		"	"	
TOTAL SOLIDS 00500	56	NA	573.1	6155	6155	521	5360	"		"	"	
TOTAL DISSOLVED SOLIDS 70300	50	NA	526.9	5658	5658	479	4950	"		"	"	
TOTAL SUSPENDED SOLIDS 00530	6	NA	46.2	496	496	42	433	"		"	"	
TOTAL VOLATILE SOLIDS 00505	0	NA	61.6	661	661	56	578	"		"	"	
AMMONIA (as N) 00610	0.24	NA	0.48	5.1	5.1	0.44	4.5	"		"	"	
KJELDAHL NITROGEN 00625	0.24	NA	0.48	5.1	5.1	0.44	4.5	"		"	"	
NITRATE (as N) 00620	0.05	NA	14	150	150	12.9	133	"		"	"	
PHOSPHORUS TOTAL (as P) 00665	0.02	NA	16.5	177	177	15.0	155	"		"	"	

SCALE OF MILES



TRACED FROM GENERAL
HIGHWAY MAP -
PICKENS COUNTY
SOUTH CAROLINA



MIXING
BASIN

EQUALIZATION
BASIN

ELEV.
1040'

AERATION
BASIN

ELEV.
1000'

R.E.A. POWER LINE

SCALE - 1" = 200'

OUTFLOW

HWG. 190
LONGITUDE
82° 45' 20"

NATURAL GULLY
NO STRUCTURE

TOWN
CREEK

6-21-71

LOCATION MAP OF
OUTFALL & DISCHARGE
IN TOWN CREEK
COUNTY OF PICKENS
STATE OF SOU. CAR.
APPLICATION BY -
SANGAMO ELEC. CO.

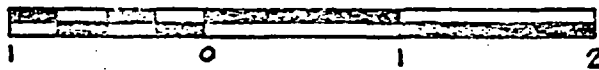
HWG. 23

760'
APPROX.

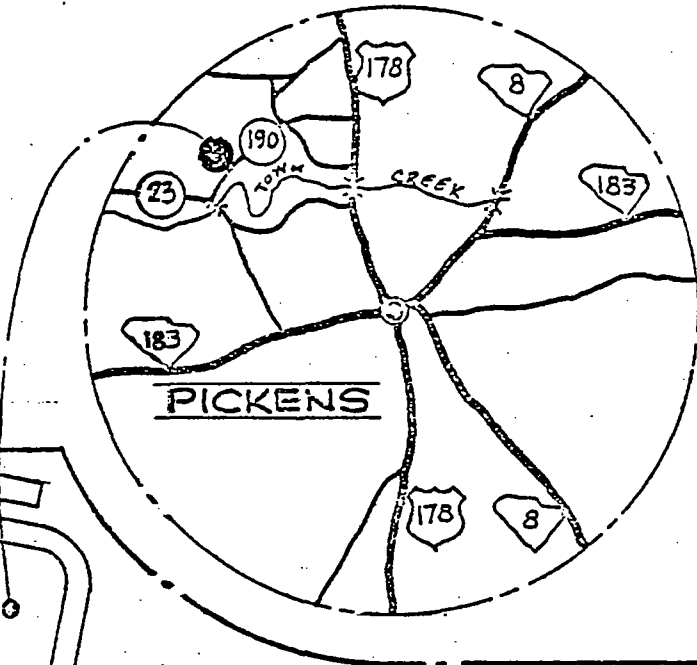
LONGITUDE
82° 53' 35"

DISCHARGE
ELEV. 929.5'

SCALE OF MILES



TRACED FROM GENERAL
HIGHWAY MAP -
PICKENS COUNTY
SOUTH CAROLINA



MIXING
BASIN

EQUALIZATION
BASIN

ELEV.
1040'

AERATION
BASIN

ELEV.
1000'

R.E.A. POWER LINE

SCALE - 1" = 200'

OUTFLOW

HWG. 190

LONGITUDE
82° 45' 20"

NATURAL GULLY
NO STRUCTURE

TOWN
CREEK

LATITUDE
34° 53' 35"

DISCHARGE
ELEV. 929.5'

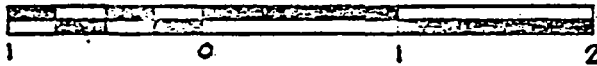
HWG. 23

760
APPROX.

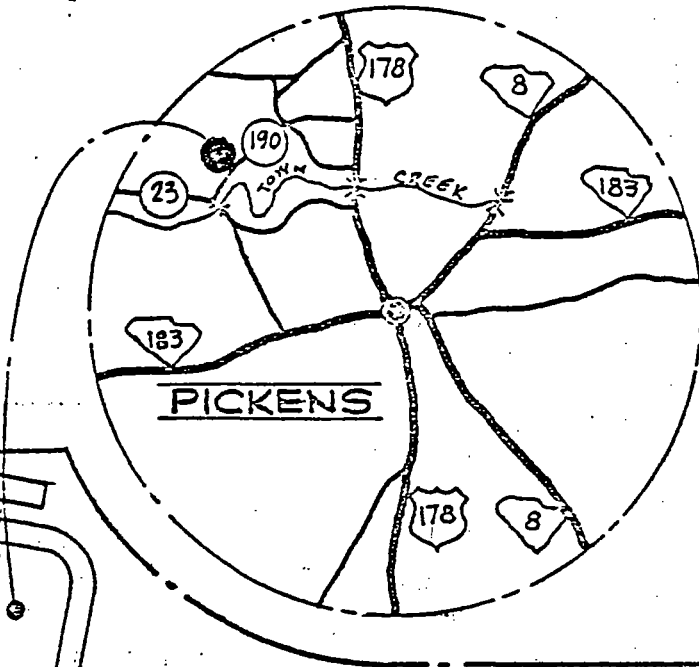
G-21-71

LOCATION MAP OF
OUTFALL & DISCHARGE
IN TOWN CREEK
COUNTY OF PICKENS
STATE OF SOU. CAR.
APPLICATION BY -
SANGAMO ELEC. CO.

SCALE OF MILES



TRACED FROM GENERAL
HIGHWAY MAP -
PICKENS COUNTY
SOUTH CAROLINA



MIXING
BASIN

EQUALIZATION
BASIN

ELEV.
1040'

AERATION
BASIN

ELEV.
1000'

R.E.A. POWER LINE

SCALE - 1" = 200'

OUTFLOW

HWG. 190

LONGITUDE
82° 48' 20"

NATURAL GULLY
NO STRUCTURE

TOWN
CREEK

LATITUDE
34° 53' 55"

DISCHARGE
ELEV. 929.5'

6-21-71

LOCATION MAP OF
OUTFALL & DISCHARGE
IN TOWN CREEK
COUNTY OF PICKENS
STATE OF SOU. CAR.
APPLICATION BY -
SANGAMO ELEC. CO.

June 21, 1971

SANGAMO ELECTRIC COMPANY

PICKENS, SOUTH CAROLINA

ADDITIONAL INFORMATION SHEET

APPLICATION FOR PERMIT TO DISCHARGE

ITEM 22 - FORM 4345 - p.3

Attachments:

A copy of South Carolina Pollution Control Authority Construction Permit #1291 dated October 9, 1968, along with the letter of transmittal from Mr. George A. Rhame, Assistant Director, to Sangamo Electric Company October 9, 1968.

Copy of letter from Mr. Rhame to Sangamo Electric Company dated November 26, 1968, correcting the above.

Copy of letter signed by Mr. Dallas R. Baker, Engineer, South Carolina Pollution Control Authority to Sangamo Electric Company dated November 25, 1970.

The construction permit is also a temporary permit to discharge pending completion of the Waste Treatment Plant and final tests and inspections. The letter from Mr. Baker is official notification that such tests and inspections have been made and were satisfactory.

Since Mr. Baker's letter did not specifically mention tests of the effluent, the Applicant called Mr. Baker on June 15, 1970 to check this point. Mr. Baker said the tests had been run and that the effluent met the Authorities requirements.

ITEM 19 - FORM 4345-1 p.1

The exact date the discharge began is not known. The original plant was 103,000 sq. ft. Hiring was started in January 1956. The plant was expanded in late 1956 and again in 1961 to its present size of 265,000 sq. ft. The earliest reference to a rate of discharge we have in our files is a letter that refers to a South Carolina permit dated May 25, 1961 for a rate of 0.4 mgd.

June 21, 1971

SANGAMO ELECTRIC COMPANY

PICKENS, SOUTH CAROLINA

ADDITIONAL INFORMATION SHEET (CONTINUED)

APPLICATION FOR PERMIT TO DISCHARGE

ITEM 22 - FORM 4345-1 p.2

The pH readings in columns 2 and 3 were based on 18 composite samples taken at 0.5 hr intervals over a 9 hour period 6-7-71. Automatic control and recording of pH is an integral part of our waste treatment plant. In addition, pH checks are run twice weekly by our Chemical Control Lab - readings range between 6.5 and 7.5 and will average close to 7.0.

We have no records of winter water temperature either intake or discharge. The summer temperature readings were taken 6-21-71 when the ambient air temperature was 90°F. Since the water remains in the aerated lagoon for 5 days, it is believed that the temperature differential between intake and discharge should be typical.

ITEM 23 - FORM 4345-1 p.2

Listed below are quantitative values of those elements marked present in our discharge - except those listed on Part A - p.4 and Sodium 00929 which was not measured due to oversight. All values are ppm.

<u>Parameter</u>	<u>Intake Water (ppm)</u>	<u>Discharge (ppm)</u>
Sulfate 00945	5.00	11.00
Chloride 00940	10.00	192.00
Cyanide 00720	less than 0.01	less than 0.01
Aluminum 01105	less than 0.10	0.30
Chromium 01034	less than 0.01	less than 0.01
Copper 01042	less than 0.01	less than 0.01
Iron 01045	0.08	0.04

June 21, 1971

SANGAMO ELECTRIC COMPANY

PICKENS, SOUTH CAROLINA

ADDITIONAL INFORMATION SHEET {CONTINUED}

APPLICATION FOR PERMIT TO DISCHARGE

ITEM 23 -- FORM 4345-1 p.2 (Continued)

<u>Parameter</u>		<u>Intake Water (ppm)</u>		<u>Discharge (ppm)</u>
Nickel				
01067	less than	0.01	less than	0.01
Oil and Grease				
00550		0.00		42.00

PART A - FORM 4345-1 p.4 of ENGINEERING FORM

*Concentration Amounts (ppm) were based on 18 composite samples taken at 0.5 hr. intervals over a 9 hour period 6-7-71. Since the facility is run continuously on a 7 day week, it is believed that the results will be representative.

PART B DISCHARGE DESCRIPTION

(Note: Submission of Part B is required of all applicants who are also required to submit Part A. Only those parameters specifically indicated in the instructions are to be reported by a particular industry)

(Office use only)

074 OYN

000036

Discharge Serial No.

001

B-1. PHYSICAL AND BIOLOGICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-1)

Intake	Discharge						
UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	CONTINUOUS MONITORING	
PARAMETER AND CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)
COLOR 00080							
SPECIFIC CONDUCTANCE 00095							
TURBIDITY 00070							
FECAL STREPTOCOCCI BACTERIA 74054							
FECAL COLIFORM BACTERIA 74055							
TOTAL COLIFORM BACTERIA 74056							

PART B

(Office use only)

074 OYN

000036

Discharge Serial No.
001

B-2. CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER DAY PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	SAMPLE FREQUENCY	METHOD OF ANALYSIS	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
ACIDITY (as CaCO ₃) 00435											
TOTAL ORGANIC CARBON (T.O.C.) 00680											
TOTAL HARDNESS 00900											
NITRITE (as N) 00615	A	NA	A	A	A	A	A	A	C	O	S A
ORGANIC NITROGEN 00605	.24	NA	.48	5.1	5.1	.44	4.5	C	O	S	A
PHOSPHORUS-ORTHO (as P) 70507											
SULFATE 00945	5	NA	12	129	129	11	113	C	O	S	A
SULFIDE 00745	A	NA	A	A	A	A	A	C	O	S	A
SULFITE 00740											
BROMIDE 71870	A	NA	A	A	A	A	A	C	O	S	A

B-2. (cont.) CHEMICAL PA		
Intake		
PARAMETER AND CODE	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)
CHLORIDE 00940	10	NA
CYANIDE 00720	.01	NA
FLUORIDE 00951		
ALUMINUM-TOTAL 01105	0.1	NA
ANTIMONY-TOTAL 01097		
ARSENIC-TOTAL 01002		
BARIUM-TOTAL 01007		
BERYLLIUM-TOTAL 01012		
BORON-TOTAL 01022		
CADMIUM-TOTAL 01027		

B							
(Office use only)							
074 OYN				000036			
				Discharge Serial No. 001			
E WATER AND DISCHARGE (See Table B-2)							
Discharge							
DAILY AVG. CONCENTRATION PER DAY	AVERAGE POUNDS PER DAY	SAMPLE TYPE	METHOD OF ANALYSIS	CONTINUOUS MONITORING			
(5)	(6)	(7)	(8)	(9)	(10)	(11)	
2262	192	1968	C	O	S	A	
.12	.01	0.1	C	O	S	A	
3.5	0.3	3	C	O	S	A	

PART B

(Office use only)

074 OYN

000036

Discharge Serial No.

001

B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER DAY PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	METHOD OF ANALYSIS	CONTINUOUS MONITORING	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
CALCIUM-TOTAL 00916											
CHROMIUM-TOTAL 01034	.01	NA	.011	.12	.12	.01	0.1	C	O	S	A
COBALT-TOTAL 01037											
COPPER-TOTAL 01042	.01	NA	.011	.12	.12	.01	0.1	C	O	S	A
IRON-TOTAL 01045	.08	NA	.044	.5	.5	.04	.4	C	O	S	A
LEAD-TOTAL 01051	A	NA	A	A	A	A	A	C	O	S	A
MAGNESIUM-TOTAL 00927	A	NA	A	A	A	A	A	C	O	S	A
MANGANESE-TOTAL 01055	A	NA	A	A	A	A	A	C	O	S	A
MERCURY-TOTAL 71900	A	NA	A	A	A	A	A	C	O	S	A
MOLYBDENUM-TOTAL 01062											

PART B

(Office use only)

074 OYN

000036

Discharge Serial No.

001

B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake		Discharge									
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	METHOD OF ANALYSIS	CONTINUOUS MONITORING	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
NICKEL-TOTAL 01067	.01	NA	.011	.12	.12	.01	0.1	C	O	S	A
POTASSIUM-TOTAL 00937											
SELENIUM-TOTAL 01147											
SILVER-TOTAL 01077											
SODIUM-TOTAL 00929	Not Available at present time										
THALLIUM-TOTAL 01059											
TIN-TOTAL 01102											
TITANIUM-TOTAL 01152											
ZINC-TOTAL 01092	A	NA	A	A	A	A	A	C	O	S	A
OIL AND GREASE 00550	O	NA	46	493	493	42	431	C	O	S	A

PART B

(Office use only)

074 OYN

000036

Discharge Serial No.

001

B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake		Discharge									
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER DAY PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	SAMPLE FREQUENCY	METHOD OF ANALYSIS	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
PHENOLS 32730											
SURFACTANTS 38260											
ALGICIDES* 74051											
CHLORINATED HYDRO- CARBONS* (EXCEPT PESTICIDES) 74052											
PESTICIDES* 74053											

*Name specific compound(s) and fill in the required data for each. Use extra blanks at the end of the form and the "Remarks" space as necessary.

PART B

(Office use only)

07.4 OYN

000036

Discharge Serial No.

001

B-3. RADIOACTIVE PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-3)

Intake	Discharge						
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY) (OPERATING YEAR)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ALPHA-TOTAL 01501	A						
ALPHA COUNTING ERROR 01502	A						
BETA-TOTAL 03501	A						
BETA COUNTING ERROR 03502	A						
GAMMA-TOTAL 05501	A						
GAMMA COUNTING ERROR 05502	A						
TRITIUM-TOTAL 07000	A						
TRITIUM COUNTING ERROR 07001	A						

B-4. REMARKS

Note- Column "o" explanation-Concentration amounts were based on 13 composite samples taken at 0.5 hour intervals over a 9 hour period.

4

Ex 4

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS. SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



Proj. file

PHONE: 803-878-8311
TWX: 810-397-2496
TELEX: 57-0441

January 15, 1973

RECEIVED
JAN 19 1973

Mr. Charles T. Branch
Environmental Protection Agency
Region IV
1421 Peachtree St., N. E.
Atlanta, Ga. 30309

Dear Mr. Branch:


SC 0740YN 2000036

With reference to our RAPP application, and the data representing our discharge, we feel our initial application accurately describes the waste discharge of the system.

Upon receipt of your letter samples were taken and submitted for analysis, which revealed that our system was as good, and even better than at the time of initial application.

Should further data be required in regard to our application, do not hesitate to call on me.

Sincerely,


H. Robert Asmus
Industrial Relations Manager

HRA/pa

5

07 MAR 1974

AAEW:JCL

Mr. R. Robert Ames
Sangam Electric Company
P. O. Box 125
Pickens, South Carolina 29671

Re: Sangam Electric Company
SC 074 GTR 2 000036

Re:

Mr. Charles Jeter, Chief
Industrial and Agricultural Division
South Carolina Department of Health and
Environmental Control
2606 Hall Street
Columbia, South Carolina 29211

Gentlemen:

The Environmental Protection Agency, in cooperation with the South Carolina Department of Health and Environmental Control, intends to issue a National Pollutant Discharge Elimination System Permit to the above mentioned company in the near future.

The attached Draft Permit and Public Notice show the proposed conditions to be incorporated as part of the NPDES Permit. If you have any comments concerning these conditions, please notify this office in writing before March 28, 1974, with a copy to the South Carolina Department of Health and Environmental Control. If you have any questions concerning the attached conditions or the procedures associated with the permit program, please contact Mr. John Lusk at (804) 326-3971.

If you should like to meet with EPA and SCDEHC to discuss the proposed conditions, please contact Mr. Charles Jeter with the SCDEHC (803/754-5483), or Mr. Lusk, immediately to arrange a meeting.

Sincerely,

George L. Barlow
Chief
Water Enforcement Branch

Enclosures

JCLAW:rep:321:3971:3/7/74

6

REVISES RAPP #0740YN2000036

Ex 6
SC 0000141

Davis & Floyd Engineers, Inc.

CONSULTING ENGINEERS

POST OFFICE DRAWER 428

GREENWOOD, SOUTH CAROLINA 29646

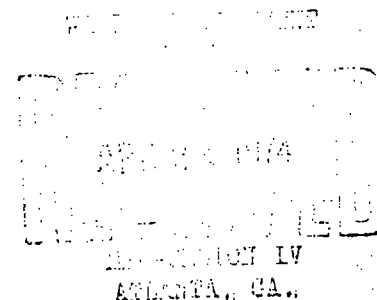
EMMETT I. DAVIS, P. E.
PHIL R. FLOYD, P. E.

T. LESLIE HUGHSTON, P. E.
WILLIAM J. DAY, P. C.

April 22, 1974
RLP-30-74

Mr. John Lank
U. S. Environmental Protection Agency
Region IV
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Re: Sangamo Electric Company
SC 074 OYN 2 000036



Dear Mr. Lank:

As I have discussed with you by 'phone, Sangamo Electric Company, under the old Corps of Engineers program, did not report several of their existing discharges. This was an honest mistake and they are, therefore, submitting this revised application.

It should be noted that this application reflects an anticipated production increase of 45% during the next year. Thus, the water usage is an estimate based on present usage and anticipated expansion. The waste characteristics are based on actual tests and are assumed to be the same through expansion.

If you should have any questions or require further information, please advise.

Yours very truly,

DAVIS & FLOYD ENGINEERS, INC.

Rudy L. Powell
Rudy L. Powell

RLP:bm

Enclosure - NPDES Permit Application
Job No. 2003-1

FOR AGENCY USE									
SC 0000141									

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

SECTION I. APPLICANT AND FACILITY DESCRIPTION

Unless otherwise specified on this form all items are to be completed. If an item is not applicable indicate "NA."

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

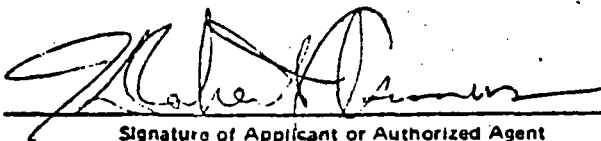
Please Print or Type

1. Legal Name of Applicant (see instructions)	101	<u>Sangamo Electric Company</u>
2. Mailing Address of Applicant (see instructions) Number & Street	102a	<u>11th and Converse Streets - P. O. Box 3347</u>
City	102b	<u>Springfield</u>
State	102c	<u>Illinois</u>
Zip Code	102d	<u>62708</u>
3. Applicant's Authorized Agent (see instructions) Name and Title	103a	<u>H. Robert Asmus</u> <u>Industrial Relations Manager</u>
Number & Street Address	103b	<u>Highway 190 (Sangamo Road) P. O. Box 128</u>
City	103c	<u>Pickens</u>
State	103d	<u>South Carolina</u>
Zip Code	103e	<u>29671</u>
Telephone	103f	<u>803</u> <u>878-6311</u> (Ext. 275)
		Area Number Code
4. Previous Application If a previous application for a National or Federal discharge per- mit has been made, give the date of application. Use numeric designation for date.	104	<u>71</u> <u>6</u> <u>21</u> YR MO DAY

I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief such information is true, complete, and accurate.

H. Robert Asmus

Printed Name of Person Signing



Signature of Applicant or Authorized Agent

102e

Industrial Relations Manager

Title

74 4 22
YR MO DAY

102f

Date Application Signed

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statement or representation, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

FOR AGENCY USE

Received 74 0 2 4
YR MO DAYOFFICE: EPA Region NumberState

5. Facility/Activity (see Instructions)
Give the name, ownership, and physical location of the plant or other operating facility where discharge(s) does or will occur.

Name

Ownership (Public, Private or Both Public and Private)

Check block if Federal Facility and give GSA Inventory Control Number

Location

Street & Number

City

County

State

6. Nature of Business State the nature of the business conducted at the plant or operating facility.

7. Facility Intake Water (see Instructions) Indicate water intake volume per day by sources. Estimate average volume per day in thousand gallons per day.

Municipal or private water system

Surface water

Groundwater

Other*

Total Item 7

*If there is intake water from 'other,' specify the source.

8. Facility Water Use Estimate average volume per day in thousand gallons per day for the following types of water usage at the facility. (see Instructions)

Noncontact cooling water

Boiler feed water

Process water (including contact cooling water)

Sanitary water

Other*

Total Item 8

*If there are discharges to 'other,' specify.

If there is 'Sanitary' water use, give the number of people served.

FOR AGENCY USE

Sangamo Electric Company

SC 0000141

Highway 190 (Sangamo Road)

Pickens, South Carolina

☐ PUB ☐ PRV ☐ BPP

☐ FED

Highway 190 (Sangamo Road)

Pickens

Pickens

South Carolina

SIC # 3679 - Manufacture of capacitors - Mica, paper, plastics and aluminum electrolytics

AGENCY USE

(1837) thousand gallons per day

0 thousand gallons per day

0 thousand gallons per day

0 thousand gallons per day

(1837) thousand gallons per day

N/A

(467) thousand gallons per day

20 thousand gallons per day

(1295) thousand gallons per day

81 thousand gallons per day

0 thousand gallons per day

(1837) thousand gallons per day

975

people served

FOR AGENCY USE									
SC 0000141									

9. All Facility Discharges and other Losses; Number and Discharge (see Instructions) Volume Specify the number of discharge points and the volume of water discharged or lost from the facility according to the categories below. Estimate average volume per day in thousand gallons per day.

		Number of Discharge Points	Total Volume Used or Discharged, Thousand Gal/Day
Surface Water	109a1	3	1,730* See Note
Sanitary wastewater transport system	109b1		
Storm water transport system	109c1		
Combined sanitary and storm water transport system	109d1		
Surface impoundment with no effluent	109e1		
Underground percolation	109f1	3	81
Well Injection	109g1		
Waste acceptance firm	109h1		
Evaporation	109i1	1	34
Consumption	109j1		
Other*	109k1		
Facility discharges and volume Total Item 9.	109l1		
	109m1		

*If there are discharges to 'other,' specify.

10. Permits, Licenses and Applications

List all existing, pending or denied permits, licenses and applications related to discharges from this facility (see instructions).

	Issuing Agency	For Agency Use	Type of Permit or License	ID Number	Date Filed YR/MO/DA	Date Issued YR/MO/DA	Date Denied YR/MO/DA	Expiration Date YR/MO/DA
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1.	S.C.		Permit to	1291		68/10/9		
	PCA		Construct					
2.	EPA		NPDES	SC 074 QYN	73/4/30			
			Application	2 000036				
3.	Corps of		Application		71/6/21			
	Engrs.		to Discharge					

11. Maps and Drawings

Attach all required maps and drawings to the back of this application.(see instructions)

12. Additional Information

Item Number	Information
9	Storm water flows through wastewater treatment plant and is discharged along with the treatment plant effluent. Thus, based on a 100 year 24 hour rainfall of 9 inches for Pickens County, the surface water discharge could increase by 2.9 MGD.

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SC 0000141

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)201a 001b. Discharge Name
Give name of discharge, if any.
(see instructions)201b Wastewater Treatment Plant Outfallc. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.201c 001

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.202a 56 1 - Estimate
YR MOb. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.202b N/A
YR MOc. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.202c N/A
YR MO3. Engineering Report Available
Check if an engineering report is
available to reviewing agency upon
request. (see instructions)203 ☐4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a South Carolina

County

204b Pickens

(If applicable) City or Town

204c Pickens

Agency Use

204d

204e

204f

5. Discharge Point Description
Discharge is into (check one):
(see instructions)Stream (includes ditches, arroyos,
and other intermittent watercourses)205a ☒ STR

Lake

☐ LKE

Ocean

☐ OCEMunicipal Sanitary Wastewater
Transport System☐ MTSMunicipal Combined Sanitary and
Storm Transport System☐ MCS

001

FOR AGENCY USE									

SC 0000141

Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

7. Discharge Receiving Water Name Name the waterway at the point of discharge.(see instructions)

If the discharge is through an out-fall that extends beyond the shoreline or is below the mean low water line, complete Item 8.

8. Offshore Discharge

a. Discharge Distance from Shore

b. Discharge Depth Below Water Surface

9. Discharge Type and Occurrence

a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)

b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.

c. Discharge Occurrence —Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

Complete Items 10 and 11 if "Intermittent" is checked in Item 9.a. Otherwise, proceed to Item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

11. Intermittent Discharge Duration and Frequency

a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.

b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

☐ STS☐ WEL☐ OTH

205b

206a

206b

207a

207b

208a

208b

209a

209b

209c

210

211a

211b

212

Town Creek

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303e

N/A feet

N/A feet

☒ (con) Continuous☐ (int) Intermittent

7 days per week

☐ JAN ☐ FEB ☐ MAR ☐ APR☐ MAY ☐ JUN ☐ JUL ☐ AUG☐ SEP ☐ OCT ☐ NOV ☐ DEC

N/A

N/A thousand gallons per discharge occurrence.

N/A hours per day

N/A discharge occurrences per day

From _____ to _____
month month

N/A

213a

SC 0000141

a. Raw Materials.

b. Products

SIC Code		Name	Maximum Amount/Day (See Table I)	Unit	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)	
3679	Capacitors	150,000	Pieces	001,002,003	

001

FOR AGENCY USE

--	--	--	--	--	--	--	--	--	--

SC 0000141

15. Waste Abatement

- a. Waste Abatement Practices
Describe the waste abatement practices used on this discharge with a brief narrative. (see instructions)

215a

Narrative: Wastewater is neutralized in a flash mixer,

flow and composition of waste is equalized in a
basin before entering an aerated lagoon from which
it is discharged to the receiving stream.

- b. Waste Abatement Codes
Using the codes listed in Table II of the Instruction Booklet, describe the waste abatement processes for this discharge in the order in which they occur if possible.

215b

- | | | |
|-------------------|-------------------|-------------------|
| (1) <u>EPUMPS</u> | (2) <u>DDOWNG</u> | (3) <u>PSCREE</u> |
| (4) <u>CPHADJ</u> | (5) <u>PEQUAL</u> | (6) <u>BAERAT</u> |
| (7) _____ | (8) _____ | (9) _____ |
| (10) _____ | (11) _____ | (12) _____ |
| (13) _____ | (14) _____ | (15) _____ |
| (16) _____ | (17) _____ | (18) _____ |
| (19) _____ | (20) _____ | (21) _____ |
| (22) _____ | (23) _____ | (24) _____ |
| (25) _____ | | |

001

FOR AGENCY USE									

SC 0000141

16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate. (see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080	X	Copper 01042	X
Ammonia 00610	X	Iron 01045	X
Organic nitrogen 00605	X	Lead 01051	
Nitrate 00620	X	Magnesium 00927	
Nitrite 00615	X	Manganese 01055	
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945	X	Molybdenum 01062	
Sulfide 00745		Nickel 01067	X
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940	X	Potassium 00937	X
Cyanide 00720	X	Sodium 00929	X
Fluoride 00951		Thallium 01059	
Aluminum 01105	X	Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	X
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	X
Calcium 00916	X	Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055		Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

FOR AGENCY USE									
SC	0	0	0	0	1	4	1		

17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16: ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00056 50050	N/A*	1.837*	1.575	0.3	4.18	*	*	*
pH Units 00400	N/A	6.8	X	4.5	8.0	*	*	*
Temperature (winter) ° F 74028	N/A	(55)	(60)	(50)	(65)	*	*	*
Temperature (summer) ° F 74027	N/A	(75)	(75)	(70)	(80)	*	*	*
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	N/A	1.0	4.5	(2.0)	(20.0)	*	*	*
Chemical Oxygen Demand (COD) mg/l 00340	N/A	10.0	40	(10)	(100)	*	*	*
Total Suspended (nonfilterable) Solids mg/l 00530	N/A	6.0	30	(5.0)	(50.0)	*	*	*
Specific Conductance micromhos/cm at 25° C 00095	N/A	55	X	(550)	(1000)	*	*	*
Settleable Matter (residue) ml/l 00545	N/A	LT 0.1	0.1	0.0	(1.0)	*	*	*

*Other discharges sharing intake flow (serial numbers). (see instructions)

001,002,003,004,005,006

() Indicates estimate

* See additional information

17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia, mg/l	N/A	0.24	0.08	0.0	1.0	*	*	*
Cyanide, mg/l	N/A	0.0	LT 0.05	0.0	0.5	*	*	*
Aluminum, mg/l	N/A	0.0	0.18	0.0	1.0	*	*	*
Copper, mg/l	N/A	0.0	LT 0.01	0.0	0.5	*	*	*
Nickel, mg/l	N/A	0.0	LT 0.04	0.0	0.5	*	*	*
Oil & Grease, mg/l	N/A	0.0	17.0	10.0	42.0	*	*	*

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

219a

N/A

b. Name and address of manufacturer

219b

N/A

c. Quantity (pounds added per million gallons of water treated).

219c

N/A

☐ APS

☐ ALM

A

10-15

.04 CN in stream
1.02 CN

219d

N/A

220

BLBD

BCCL

☐ APOF

ПЕРВО

☐ OCFP

☐ COND

☐ CTBD☐ MFPR☐ OTHER

N/A

BLBD

221a

10 9f.

221b

10 °F.

222

N/A °F./hour

BLBD

BLBD

BLBD

BLBD

223a

221b

224

N/A feet/sec.

225

N/A minutes

10%	5%	1%	Maximum
°F	°F	°F	°F
°F	°F	°F	°F

No data available

[illegible]

226

[illegible]

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SC 0000141

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)

201a 002

b. Discharge Name
Give name of discharge, if any.
(see instructions)

201b West Cooling Water Outfall

c. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.

201c N/A

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.

202a 56 1 - Estimate
YR MO

b. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.

202b N/A
YR MO

c. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.

202c N/A
YR MO

3. Engineering Report Available

Check if an engineering report is
available to reviewing agency upon
request. (see instructions)

203 ☐4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a South Carolina

County

204b Pickens

(If applicable) City or Town

204c Pickens

Agency Use

204d

204e

204f

5. Discharge Point Description

Discharge is into (check one);
(see instructions)

Stream (includes ditches, arroyos,
and other intermittent watercourses)

205a ☒ STR

Lake

☐ LKE

Ocean

☐ OCE

Municipal Sanitary Wastewater
Transport System

☐ MTS

Municipal Combined Sanitary and
Storm Transport System

☐ MCS

002

FOR AGENCY USE									

SC 0000141

Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

7. Discharge Receiving Water Name Name the waterway at the point of discharge.(see instructions)

If the discharge is through an outfall that extends beyond the shoreline or is below the mean low water line, complete item 8.

8. Offshore Discharge

- a. Discharge Distance from Shore

- b. Discharge Depth Below Water Surface

9. Discharge Type and Occurrence

- a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)

- b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.

- c. Discharge Occurrence —Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

Complete items 10 and 11 if "Intermittent" is checked in item 9.a. Otherwise, proceed to item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

11. Intermittent Discharge Duration and Frequency

- a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.

- b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

☐ STS☐ WEL☐ OTH

205b

206a

34 DEG 53 MIN 46 SEC

206b

82 DEG 43 MIN 27 SEC

207a

Unnamed tributary to Twelve Mile Creek

207b

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303a

208a

N/A feet

208b

N/A feet

209a

☒ (con) Continuous☐ (int) Intermittent

209b

7 days per week

209c

☐ JAN ☐ FEB ☐ MAR ☐ APR☐ MAY ☐ JUN ☐ JUL ☐ AUG☐ SEP ☐ OCT ☐ NOV ☐ DEC

N/A

210

N/A thousand gallons per discharge occurrence.

211a

N/A hours per day

211b

N/A discharge occurrences per day

212

From _____ to _____
month month

N/A

[illegible]

SC 0000141

- 213a

Cooling water and process water associated with the manufacture of capacitors.

- ### a. Raw Materials

[illegible]

b. Products

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
3679	Capacitors	150,000	Pieces	001,002,003

FOR AGENCY USE

SC 0000141

16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate. (see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080	X	Copper 01042	
Ammonia 00610	X	Iron 01045	X
Organic nitrogen 00605	X	Lead 01051	
Nitrate 00620	X	Magnesium 00927	
Nitrite 00615		Manganese 01055	
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945	X	Molybdenum 01062	
Sulfide 00745		Nickel 01067	
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940	X	Potassium 00937	X
Cyanide 00720		Sodium 00929	X
Fluoride 00951		Thallium 01059	
Aluminum 01105	X	Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	X
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	X
Calcium 00916	X	Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055		Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

DISCHARGE SERIAL NUMBER

002

FOR AGENCY USE

SC 0000141

17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16: ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00050X 50050	N/A*	1.837*	0.138	(0.05)	(0.2)	*	*	*
pH Units 00400	N/A	6.8	X	5.1	6.7	*	*	*
Temperature (winter) ° F 74028	N/A	(55)	70	60	75	*	*	*
Temperature (summer) ° F 74027	N/A	(75)	70	60	75	*	*	*
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	N/A	1	3.0	(1.0)	(10.0)	*	*	*
Chemical Oxygen Demand (COD) mg/l 00340	N/A	10	10.0	(5.0)	(20.0)	*	*	*
Total Suspended (nonfilterable) Solids mg/l 00530	N/A	6	12.7	(5.0)	(30.0)	*	*	*
Specific Conductance micromhos/cm at 25° C 00095	N/A	55	X	(100)	(500)	*	*	*
Settleable Matter (residue) ml/l 00545	N/A	LT 0.01	LT 0.01	0.0	(1.0)	*	*	*

*Other discharges sharing intake flow (serial numbers). (see instructions)

001,002,003,004,005,006

() Indicates estimate

* See additional information



17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia, mg/l	N/A*	0.24	0.1	0.0	(1.0)	*	*	*
Aluminum, mg/l	N/A	0.0	0.1	0.0	(0.5)	*	*	*
Oil & Grease, mg/l	N/A	0.0	60	10	(100)	*	*	*

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

b. Name and address of manufacturer

c. Quantity (pounds added per million gallons of water treated).

218

☐ APS

N/A

☐ ALM

219a

N/A

219b

N/A

219c

N/A

() Indicates estimate

* See additional information

002

FOR AGENCY USE

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- d. Chemical composition of these additives (see instructions).

219d

N/A

Complete Items 20-25 if there is a thermal discharge (e.g., associated with a steam and/or power generation plant, steel mill, petroleum refinery, or any other manufacturing process) and the total discharge flow is 10 million gallons per day or more. (see instructions)

20. Thermal Discharge Source Check the appropriate item(s) indicating the source of the discharge. (see instructions)

Boiler Blowdown

Boiler Chemical Cleaning

Ash Pond Overflow

Boiler Water Treatment — Evaporator Blowdown

Oil or Coal Fired Plants — Effluent from Air Pollution Control Devices

Condense Cooling Water

Cooling Tower Blowdown

Manufacturing Process

Other

☐ BLBO☐ BCCL☐ APOF☐ EPBD☐ OCFP

N/A

☐ COND☐ CTBD☐ MFPR☐ OTHR

21. Discharge/Receiving Water Temperature Difference

Give the maximum temperature difference between the discharge and receiving waters for summer and winter operating conditions. (see instructions)

Summer

221a 10 °F.

Winter

221b 10 °F.

22. Discharge Temperature, Rate of Change Per Hour

Give the maximum possible rate of temperature change per hour of discharge under operating conditions. (see instructions)

222 N/A °F./hour

23. Water Temperature, Percentile Report (Frequency of Occurrence)

In the table below, enter the temperature which is exceeded 10% of the year, 5% of the year, 1% of the year and not at all (maximum yearly temperature). (see instructions)

Frequency of occurrence

a. Intake Water Temperature (Subject to natural changes)

223a

b. Discharge Water Temperature

223b

10%	5%	1%	Maximum
°F	°F	°F	°F
°F	°F	°F	°F

NO DATA AVAILABLE

24. Water Intake Velocity (see instructions)

224 N/A feet/sec.

25. Retention Time Give the length of time, in minutes, from start of water temperature rise to discharge of cooling water. (see instructions)

225 (15) minutes

() Indicates estimate

002

FOR AGENCY USE

SC 0000141

26. Additional information

226

[illegible]

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SC 0000141

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)

201a

003

b. Discharge Name
Give name of discharge, if any.
(see instructions)

201b

North Cooling Water Outfall

c. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.

201c

N/A

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.

202a

56 1 - Estimated
YR MO

b. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.

202b

N/A

c. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.

202c

N/A

3. Engineering Report Available
Check if an engineering report is
available to reviewing agency upon
request. (see instructions)

203

☐

4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a

South Carolina

County

204b

Pickens

(If applicable) City or Town

204c

Pickens

5. Discharge Point Description
Discharge is into (check one):
(see instructions)

Stream (includes ditches, arroyos,
and other intermittent watercourses)

205a

☒ STR

Lake

☐ LKE

Ocean

☐ OCE

Municipal Sanitary Wastewater
Transport System

☐ MTS

Municipal Combined Sanitary and
Storm Transport System

☐ MCS

Agency Use

204d

204e

204f

003

FOR AGENCY USE									

SC 0000141

Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

7. Discharge Receiving Water Name Name the waterway at the point of discharge.(see instructions)

If the discharge is through an out-fall that extends beyond the shore-line or is below the mean low water line, complete Item 8.

8. Offshore Discharge

- a. Discharge Distance from Shore
- b. Discharge Depth Below Water Surface

9. Discharge Type and Occurrence

- a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)
- b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.
- c. Discharge Occurrence —Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

Complete Items 10 and 11 if "Intermittent" is checked in Item 9.a. Otherwise, proceed to Item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

11. Intermittent Discharge Duration and Frequency

- a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.
- b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

☐ STS☐ WEL☐ OTH

205b

206a

34 DEG 53 MIN 50 SEC

206b

82 DEG 43 MIN 21 SEC

207a

Unnamed Tributary to Twelve Mile Creek.

207b

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303e

208a

N/A feet

208b

N/A feet

209a

☒ (con) Continuous☐ (int) Intermittent

209b

7 days per week

209c

☐ JAN ☐ FEB ☐ MAR ☐ APR☐ MAY ☐ JUN ☐ JUL ☐ AUG N/A☐ SEP ☐ OCT ☐ NOV ☐ DEC

210

N/A thousand gallons per discharge occurrence.

211a

N/A hours per day

211b

N/A discharge occurrences per day

212

From month to month

N/A

FOR AGENCY USE

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- 13. Activity Description** Give a narrative description of activity producing this discharge.(see instructions)

213a

Cooling water associated with the manufacture
of capacitors - electrolytics

- 14. Activity Causing Discharge** For each SIC Code which describes the activity causing this discharge, supply the type and maximum amount of either the raw material consumed (Item 14a) or the product produced (Item 14b) in the units specified in Table I of the Instruction Booklet. For SIC Codes not listed in Table I, use raw material or production units normally used for measuring production. (see instructions)

a. Raw Materials

[illegible]**b. Products**

B. Products				
SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
3679	Capacitors	150,000	Pieces	001, 002, 003

003

FOR AGENCY USE									

SC 0000141

15. Waste Abatement

- a. Waste Abatement Practices**
Describe the waste abatement practices used on this discharge with a brief narrative. (see instructions)

215aNarrative: N/A

- b. Waste Abatement Codes**
Using the codes listed in Table II of the Instruction Booklet, describe the waste abatement processes for this discharge in the order in which they occur if possible.

215b

- (1) NONONE, (2) _____, (3) _____,
 (4) _____, (5) _____, (6) _____,
 (7) _____, (8) _____, (9) _____,
 (10) _____, (11) _____, (12) _____,
 (13) _____, (14) _____, (15) _____,
 (16) _____, (17) _____, (18) _____,
 (19) _____, (20) _____, (21) _____,
 (22) _____, (23) _____, (24) _____,
 (25) _____.

003

FOR AGENCY USE									
SC	0	0	0	0	0	1	4	1	

16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate.(see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080	X	Copper 01042	
Ammonia 00610	X	Iron 01045	
Organic nitrogen 00605		Lead 01051	
Nitrate 00620	X	Magnesium 00927	
Nitrite 00615		Manganese 01055	
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945	X	Molybdenum 01062	
Sulfide 00745		Nickel 01067	
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940	X	Potassium 00937	X
Cyanide 00720		Sodium 00929	X
Fluoride 00951		Thallium 01059	
Aluminum 01105	X	Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	X
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	X
Calcium 00916	X	Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055		Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

SC 00000141

17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16; ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00056	N/A*	(1.837)*	0.017	(0.0)	(0.05)	*	*	*
pH Units 00400	N/A	6.8	X	5.3	6.7	*	*	*
Temperature (winter) ° F 74028	N/A	(55)	70	60	85	*	*	*
Temperature (summer) ° F 74027	N/A	(75)	70	60	85	*	*	*
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	N/A	1	2.4	(1.0)	(10.0)	*	*	*
Chemical Oxygen Demand (COD) mg/l 00340	N/A	10	10.0	(5.0)	(20.0)	*	*	*
Total Suspended (nonfilterable) Solids mg/l 00530	N/A	6	16.0	(5.0)	(30.0)	*	*	*
Specific Conductance micromhos/cm at 25° C 00095	N/A	55	X	(100)	(500)	*	*	*
Settleable Matter (residue) ml/l 00545	N/A	LT 0.01	LT 0.01	0.0	(1.0)	*	*	*

*Other discharges sharing intake flow (serial numbers). (see instructions)

001, 002, 003, 004, 005, 006

() Indicates estimate

* See additional information

17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia, mg/l	N/A*	0.24	0.1	0.0	(1.0)	*	*	*
Aluminum, mg/l	N/A	0.0	0.05	0.0	(0.5)	*	*	*
Oil & Grease; mg/l	N/A	0.0	11.0	(0.0)	(20.0)	*	*	*

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

218

☐ APS

☐ ALM

N/A

219a

N/A

b. Name and address of manufacturer

219b

N/A

c. Quantity (pounds added per million gallons of water treated).

219c

N/A

* See additional information

() Indicates estimate

003

FOR AGENCY USE

SC 0000141

d. Chemical composition of these additives (see instructions).

219d

N/A

Complete items 20-25 if there is a thermal discharge (e.g., associated with a steam and/or power generation plant, steel mill, petroleum refinery, or any other manufacturing process) and the total discharge flow is 10 million gallons per day or more. (see instructions)

20. Thermal Discharge Source Check the appropriate item(s) indicating the source of the discharge. (see instructions)

Boiler Blowdown

Boiler Chemical Cleaning

Ash Pond Overflow

Boiler Water Treatment — Evaporator Blowdown

Oil or Coal Fired Plants — Effluent from Air Pollution Control Devices

Condense Cooling Water

Cooling Tower Blowdown

Manufacturing Process

Other

220

☐ BLBD☐ BCCL☐ APOF☐ EPBD☐ OCFP

N/A

☐ COND☐ CTBD☐ MFPR☐ OTHR

21. Discharge/Receiving Water Temperature Difference

Give the maximum temperature difference between the discharge and receiving waters for summer and winter operating conditions. (see instructions)

Summer

221a

10 °F.

Winter

221b

10 °F.

22. Discharge Temperature, Rate of Change Per Hour

Give the maximum possible rate of temperature change per hour of discharge under operating conditions. (see instructions)

222

N/A °F./hour

23. Water Temperature, Percentile Report (Frequency of Occurrence) In the table below, enter the temperature which is exceeded 10% of the year, 5% of the year, 1% of the year and not at all (maximum yearly temperature). (see instructions)

Frequency of occurrence

a. Intake Water Temperature (Subject to natural changes)

223a

b. Discharge Water Temperature

223b

10%	5%	1%	Maximum
°F	°F	°F	°F
°F	°F	°F	°F

No data available

24. Water Intake Velocity (see instructions)

224

N/A feet/sec.

25. Retention Time Give the length of time, in minutes, from start of water temperature rise to discharge of cooling water. (see instructions)

225

(15) minutes

() Indicates estimate

003

[illegible]

SC 0000141

26. Additional information

226

[illegible]

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SC 0000141

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)

201a 004

b. Discharge Name
Give name of discharge, if any.
(see instructions)

201b North Septic Tank

c. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.

201c N/A

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.

202a 56 1 - estimated
YR MO

b. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.

202b N/A
YR MO

c. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.

202c N/A
YR MO

3. Engineering Report Available

Check if an engineering report is
available to reviewing agency upon
request. (see instructions)

203 ☐4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a South Carolina

County

204b Pickens

(If applicable) City or Town

204c Pickens

Agency Use

204d

204e

204f

5. Discharge Point Description
Discharge is into (check one):
(see instructions)

Stream (includes ditches, arroyos,
and other intermittent watercourses)

205a ☐ STR

Lake

☐ LKE

Ocean

☐ OCE

Municipal Sanitary Wastewater
Transport System

☐ MTS

Municipal Combined Sanitary and
Storm Transport System

☐ MCS

004

FOR AGENCY USE

SC 0000141

Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

☐ STS☐ WEL☒ OTH

Septic Tank

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

205b

206a

206b

207a

N/A

If the discharge is through an out-fall that extends beyond the shore-line or is below the mean low water line, complete Item 8.

8. Offshore Discharge

a. Discharge Distance from Shore

b. Discharge Depth Below Water Surface

207b

208a

208b

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303e

9. Discharge Type and Occurrence

a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)

b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.

c. Discharge Occurrence —Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

209a

☒ (con) Continuous☐ (int) Intermittent

209b

7 days per week

209c

☐ JAN ☐ FEB ☐ MAR ☐ APR☐ MAY ☐ JUN ☐ JUL ☐ AUG☐ SEP ☐ OCT ☐ NOV ☐ DEC

N/A

Complete Items 10 and 11 if "Intermittent" is checked in Item 9.a. Otherwise, proceed to Item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

210

N/A thousand gallons per discharge occurrence.

11. Intermittent Discharge Duration and Frequency

a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.

b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

211a

N/A hours per day

211b

N/A discharge occurrences per day

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

212

From _____ to _____ month month

N/A

004

FOR AGENCY USE

SC 000014

- 13. Activity Description** Give a narrative description of activity producing this discharge.(see instructions)

213a

Sanitary Waste

- 14. Activity Causing Discharge** For each SIC Code which describes the activity causing this discharge, supply the type and maximum amount of either the raw material consumed (Item 14a) or the product produced (Item 14b) in the units specified in Table I of the Instruction Booklet. For SIC Codes not listed in Table I, use raw material or production units normally used for measuring production. (see instructions)

2. Raw Materials

SIC Code	Name	Maximum Amount/Day (See Table I)	Unit	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
4952	N/A	975	N/A	004,005,006

b. Products

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)

FOR AGENCY USE					

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16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate. (see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080	X	Copper 01042	
Ammonia 00610	X	Iron 01045	
Organic nitrogen 00605	X	Lead 01051	
Nitrate 00620	X	Magnesium 00927	
Nitrite 00615		Manganese 01055	
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945		Molybdenum 01062	
Sulfide 00745		Nickel 01067	
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940		Potassium 00937	
Cyanide 00720		Sodium 00929	
Fluoride 00951		Thallium 01059	
Aluminum 01105		Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	
Calcium 00916		Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055	X	Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

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For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16; ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00056 50050	N/A*	1.837*	0.027	0.0	(0.05)	*	*	*
pH Units 00400	N/A	6.8	X	6.2	6.8	*	*	*
Temperature (winter) ° F 74028	N/A	(55)	65	(60)	(70)	*	*	*
Temperature (summer) ° F 74027	N/A	(75)	65	(60)	(70)	*	*	*
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	N/A	1.0	150	(100)	(300)	*	*	*
Chemical Oxygen Demand (COD) mg/l 00340	N/A	10.0	400	(100)	(600)	*	*	*
Total Suspended (nonfilterable) Solids mg/l 00530	N/A	6.0	66.0	(30.0)	(100.0)	*	*	*
Specific Conductance micromhos/cm at 25° C 00095	N/A	55.0	X	(100)	(500)	*	*	*
Settleable Matter (residue) ml/l 00545	N/A	LT 0.1	0.3	(0.1)	(1.0)	*	*	*

001,002,003,004,005,006

() Indicates Estimate

* See additional information



17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia, mg/l	N/A*	0.24	38.4	(10.0)	(50.0)	*	*	*

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

219a

N/A

b. Name and address of manufacturer

219b

N/A

c. Quantity (pounds added per million gallons of water treated).

219c

N/A

* See additional information

() Indicates estimate

218d

N/A

220:

221a

_____ of

221b

 OF.

222

____ °F./hour N/A

223a

σ_F	σ_F	σ_F	σ_F
------------	------------	------------	------------

223b

OF	OF	OF	OF
----	----	----	----

224

N/A feet/sec.

225.

N/A minutes

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SC 0000141

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)201a 005b. Discharge Name
Give name of discharge, if any.
(see instructions)201b Middle Septic Tankc. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.201c N/A

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.202a 57 1 - estimated
YR MOb. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.202b N/A
YR MOc. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.202c N/A
YR MO

3. Engineering Report Available

Check if an engineering report is
available to reviewing agency upon
request. (see instructions)203 ☐4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a South Carolina

County

204b Pickens

(If applicable) City or Town

204c Pickens

Agency Use

204d

204e

204f

5. Discharge Point Description

Discharge is into (check one);
(see instructions)Stream (Includes ditches, arroyos,
and other intermittent watercourses)205a ☐STR

Lake

☐LKE

Ocean

☐OCEMunicipal Sanitary Wastewater
Transport System☐MTSMunicipal Combined Sanitary and
Storm Transport System☐MCS

FOR AGENCY USE									

SC 0000141

Municipal Storm Water Transport System

Well (Injection)

Other

If "other" is checked, specify

☐ STS☐ WEL☒ OTH

Septic Tank

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

205b

206a

206b

207a

34 DEG 53 MIN 47 SEC

82 DEG 43 MIN 24 SEC

N/A

7. Discharge Receiving Water Name Name the waterway at the point of discharge. (see instructions)

If the discharge is through an out-fall that extends beyond the shore-line or is below the mean low water line, complete Item 8.

8. Offshore Discharge

a. Discharge Distance from Shore

b. Discharge Depth Below Water Surface

207b

208a

208b

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303e

N/A feet

N/A feet

9. Discharge Type and Occurrence

a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)

b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.

c. Discharge Occurrence — Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

209a

209b

209c

☒ (con) Continuous☐ (int) Intermittent

7 days per week

☐ JAN ☐ FEB ☐ MAR ☐ APR☐ MAY ☐ JUN ☐ JUL ☐ AUG☐ SEP ☐ OCT ☐ NOV ☐ DEC

N/A

Complete Items 10 and 11 if "Intermittent" is checked in Item 9.a. Otherwise, proceed to Item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

210

N/A thousand gallons per discharge occurrence.

11. Intermittent Discharge Duration and Frequency

a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.

b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

211a

211b

N/A hours per day

N/A discharge occurrences per day

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

212

From month to month

N/A

FOR AGENCY USE

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SC 0000141

13. Activity Description Give a narrative description of activity producing this discharge.(see instructions)

213a

Sanitary Waste

14. Activity Causing Discharge For each SIC Code which describes the activity causing this discharge, supply the type and maximum amount of either the raw material consumed (Item 14a) or the product produced (Item 14b) in the units specified in Table I of the Instruction Booklet. For SIC Codes not listed in Table I, use raw material or production units normally used for measuring production.(see instructions)

a. Raw Materials

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
4952	N/A	975	N/A	004,005,006

b. Products

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)

005

FOR AGENCY USE

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SC 0000141

16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate. (see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080	X	Copper 01042	
Ammonia 00610	X	Iron 01045	
Organic nitrogen 00605	X	Lead 01051	
Nitrate 00620	X	Magnesium 00927	
Nitrite 00615		Manganese 01055	
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945		Molybdenum 01062	
Sulfide 00745		Nickel 01067	
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940		Potassium 00937	
Cyanide 00720		Sodium 00929	
Fluoride 00951		Thallium 01059	
Aluminum 01105		Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	
Calcium 00916		Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055	X	Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16: ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00256x 50050	N/A*	1.837*	0.027	0.0	(0.05)	*	*	*
pH Units 00400	N/A	6.8	X	6.2	7.2	*	*	*
Temperature (winter) ° F 74028	N/A	(55)	65	(60)	(70)	*	*	*
Temperature (summer) ° F 74027	N/A	(75)	65	(60)	(70)	*	*	*
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	N/A	1.0	75	(50)	(250)	*	*	*
Chemical Oxygen Demand (COD) mg/l 00340	N/A	10.0	170	(75)	(400)	*	*	*
Total Suspended (nonfilterable) Solids mg/l 00530	N/A	6.0	27	(10)	(100)	*	*	*
Specific Conductance micromhos/cm at 25° C 00095	N/A	55	X	(100)	(500)	*	*	*
Settleable Matter (residue) ml/l 00545	N/A	LT 0.1	0.2	0.0	(1.0)	*	*	*

*Other discharges sharing intake flow (serial numbers). (see instructions)

001,002,003,004,005,006

* See additional information

() Indicates estimate

DISCHARGE SERIAL NUMBER

005

FOR AGENCY USE

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SC 0000141

17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia, mg/l	N/A*	24	11.8	(5.0)	(30.0)	*	*	*

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

b. Name and address of manufacturer

c. Quantity (pounds added per million gallons of water treated).

☐ APS

N/A

☐ ALM

218

219a

N/A

219b

N/A

219c

N/A

* See additional information

() Indicates estimate

005

FOR AGENCY USE

SC 0000141

- d. Chemical composition of these additives (see instructions).

219d

N/A

Complete Items 20-25 if there is a thermal discharge (e.g., associated with a steam and/or power generation plant, steel mill, petroleum refinery, or any other manufacturing process) and the total discharge flow is 10 million gallons per day or more. (see instructions)

20. Thermal Discharge Source Check the appropriate item(s) indicating the source of the discharge. (see instructions)

Boiler Blowdown

Boiler Chemical Cleaning

Ash Pond Overflow

Boiler Water Treatment — Evaporator Blowdown

Oil or Coal Fired Plants — Effluent from Air Pollution Control Devices

Condense Cooling Water

Cooling Tower Blowdown

Manufacturing Process

Other

☐ BLBD

☐ BCCL

☐ APOF

☐ EPBD

☐ OCFP

N/A

☐ COND

☐ CTBD

☐ MFPR

☐ OTHR

21. Discharge/Receiving Water Temperature Difference

Give the maximum temperature difference between the discharge and receiving waters for summer and winter operating conditions. (see instructions)

Summer

221a

_____ °F.

N/A

Winter

221b

_____ °F.

22. Discharge Temperature, Rate of Change Per Hour

Give the maximum possible rate of temperature change per hour of discharge under operating conditions. (see instructions)

222

_____ °F./hour

N/A

23. Water Temperature, Percentile Report (Frequency of Occurrence)

In the table below, enter the temperature which is exceeded 10% of the year, 5% of the year, 1% of the year and not at all (maximum yearly temperature). (see instructions)

Frequency of occurrence

- a. Intake Water Temperature (Subject to natural changes)

223a

- b. Discharge Water Temperature

223b

10%	5%	1%	Maximum
_____ °F	_____ °F	_____ °F	_____ °F
_____ °F	_____ °F	_____ °F	_____ °F

No data available

24. Water Intake Velocity (see instructions)

224

N/A _____ feet/sec.

25. Retention Time Give the length of time, in minutes, from start of water temperature rise to discharge of cooling water. (see instructions)

225

N/A _____ minutes

005

FOR AGENCY USE

SC 000014

26. Additional information

226

Item

Information

17

All water is treated water purchased from the City of Pickens.

17

Average concentrations are based on a twenty-four hour composite sample obtained on April 10, 1974. Discharge concentrations are for the wastewater as it leaves the manufacturing plant and not for the water leaving the septic tank and going into the field.

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SC 0000141

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)

201a 006

b. Discharge Name
Give name of discharge, if any.
(see instructions)

201b South Septic Tank

c. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.

201c N/A

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.

202a 61 1 - Estimated
YR MO

b. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.

202b N/A
YR MO

c. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.

202c N/A
YR MO

3. Engineering Report Available
Check if an engineering report is
available to reviewing agency upon
request. (see instructions)

203 ☐

4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a South Carolina

County

204b Pickens

(If applicable) City or Town

204c Pickens

Agency Use	
204d	
204e	
204f	

5. Discharge Point Description
Discharge is into (check one):
(see instructions)

Stream (Includes ditches, arroyos,
and other intermittent watercourses)

205a ☐ STR

Lake

☐ LKE

Ocean

☐ OCE

Municipal Sanitary Wastewater
Transport System

☐ MTS

Municipal Combined Sanitary and
Storm Transport System

☐ MCS

006

FOR AGENCY USE									
SC	0	0	0	0	1	4	1		

Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

7. Discharge Receiving Water Name Name the waterway at the point of discharge. (see instructions)

If the discharge is through an outfall that extends beyond the shoreline or is below the mean low water line, complete item 8.

8. Offshore Discharge

- a. Discharge Distance from Shore
- b. Discharge Depth Below Water Surface

9. Discharge Type and Occurrence

- a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)
- b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.
- c. Discharge Occurrence —Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

Complete items 10 and 11 if "Intermittent" is checked in item 9.a. Otherwise, proceed to item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

11. Intermittent Discharge Duration and Frequency

- a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.
- b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

☐ STS☐ WEL☒ OTH

Septic Tank

205b

206a

34 DEG 53 MIN 47 SEC

206b

82 DEG 43 MIN 24 SEC

207a

N/A

207b

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303e

208a

N/A feet

208b

N/A feet

209a

- ☒ (con) Continuous
- ☐ (int) Intermittent

209b

7 days per week

209c

- ☐ JAN ☐ FEB ☐ MAR ☐ APR
- ☐ MAY ☐ JUN ☐ JUL ☐ AUG
- ☐ SEP ☐ OCT ☐ NOV ☐ DEC

N/A

210

N/A thousand gallons per discharge occurrence.

211a

N/A hours per day

211b

N/A discharge occurrences per day

212

From month to month

N/A

006

FOR AGENCY USE									
SC 0000141									

13. Activity Description Give a narrative description of activity producing this discharge.(see instructions)

213a

Sanitary Waste

14. Activity Causing Discharge For each SIC Code which describes the activity causing this discharge, supply the type and maximum amount of either the raw material consumed (Item 14a) or the product produced (Item 14b) in the units specified in Table I of the Instruction Booklet. For SIC Codes not listed in Table I, use raw material or production units normally used for measuring production.(see instructions)

a. Raw Materials

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
4952	N/A	975	N/A	004,005,006

b. Products

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)

SC 0000141

2. Waste Abatement Practices
Describe the waste abatement practices used on this discharge with a brief narrative. (see instructions)

Narrative: Septic Tank

215b

- (1) LOTHER , (2) _____ , (3) _____ ,
(4) _____ , (5) _____ , (6) _____ ,
(7) _____ , (8) _____ , (9) _____ ,
(10) _____ , (11) _____ , (12) _____ ,
(13) _____ , (14) _____ , (15) _____ ,
(16) _____ , (17) _____ , (18) _____ ,
(19) _____ , (20) _____ , (21) _____ ,
(22) _____ , (23) _____ , (24) _____ ,
(25) _____ .

FOR AGENCY USE									
SC 0000141									

16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate. (see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080	X	Copper 01042	
Ammonia 00610	X	Iron 01045	
Organic nitrogen 00605	X	Lead 01051	
Nitrate 00620	X	Magnesium 00927	
Nitrite 00615		Manganese 01055	
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945		Molybdenum 01062	
Sulfide 00745		Nickel 01067	
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940		Potassium 00937	
Cyanide 00720		Sodium 00929	
Fluoride 00951		Thallium 01059	
Aluminum 01105		Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	
Calcium 00916		Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055	X	Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16: ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code

217a

Parameter and Code	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day X00B56X 50050	N/A*	1.837*	0.027	0.0	(0.01)	*	*	*
pH Units 00400	N/A	6.8	X	6.5	7.0	*	*	*
Temperature (winter) ° F 74028	N/A	(55)	65	(60)	(70)	*	*	*
Temperature (summer) ° F 74027	N/A	(75)	65	(60)	(70)	*	*	*
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	N/A	1.0	75	(50)	(250)	*	*	*
Chemical Oxygen Demand (COD) mg/l 00340	N/A	10.0	170	(75)	(400)	*	*	*
Total Suspended (nonfilterable) Solids mg/l 00530	N/A	6.0	4.0	0.0	(50.0)	*	*	*
Specific Conductance micromhos/cm at 25° C. 00095	N/A	55	X	(100)	(500)	*	*	*
Settleable Matter (residue) ml/l 00545	N/A	LT 0.1	0.3	0.0	(1.0)	*	*	*

*Other discharges sharing intake flow (serial numbers). (see instructions)

001,002,003,004,005,006

* See additional information

() Indicates estimate

17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia, mg/l	N/A*	.24	36.0	(10.0)	(50.0)	*	*	*

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

b. Name and address of manufacturer

c. Quantity (pounds added per million gallons of water treated).

218

☐ APS

N/A

☐ ALM

219a

N/A

219b

N/A

219c

N/A

* See additional information

() Indicates estimate

006

FOR AGENCY USE

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- d. Chemical composition of these additives (see instructions).

219d

N/A

Complete Items 20-25 if there is a thermal discharge (e.g., associated with a steam and/or power generation plant, steel mill, petroleum refinery, or any other manufacturing process) and the total discharge flow is 10 million gallons per day or more. (see instructions)

20. Thermal Discharge Source Check the appropriate item(s) indicating the source of the discharge. (see instructions)

Boiler Blowdown

Boiler Chemical Cleaning

Ash Pond Overflow

Boiler Water Treatment — Evaporator Blowdown

Oil or Coal Fired Plants — Effluent from Air Pollution Control Devices

Condense Cooling Water

Cooling Tower Blowdown

Manufacturing Process.

Other

220

☐ BLBD

☐ BCCL

☐ APOF

☐ EPBD

☐ OCFP

N/A

☐ COND

☐ CTBD

☐ MFPR

☐ OTHR

21. Discharge/Receiving Water Temperature Difference

Give the maximum temperature difference between the discharge and receiving waters for summer and winter operating conditions. (see instructions)

Summer

221a

_____ °F.

N/A

Winter

221b

_____ °F.

22. Discharge Temperature, Rate of Change Per Hour

Give the maximum possible rate of temperature change per hour of discharge under operating conditions. (see instructions)

222

_____ °F./hour

N/A

23. Water Temperature, Percentile Report (Frequency of Occurrence)

In the table below, enter the temperature which is exceeded 10% of the year, 5% of the year, 1% of the year and not at all (maximum yearly temperature). (see instructions)

Frequency of occurrence

a. Intake Water Temperature (Subject to natural changes)

223a

b. Discharge Water Temperature

223b

10%	5%	1%	Maximum
_____ °F	_____ °F	_____ °F	_____ °F
_____ °F	_____ °F	_____ °F	_____ °F

No data available

24. Water Intake Velocity (see instructions)

224

N/A _____ feet/sec.

25. Retention Time Give the length of time, in minutes, from start of water temperature rise to discharge of cooling water. (see instructions)

225

N/A _____ minutes

006

FOR AGENCY USE

SC 000014

26. Additional information

[illegible]

FOR AGENCY USE									

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

SC 0000141

SECTION III. WASTE ABATEMENT REQUIREMENTS & IMPLEMENTATION (CONSTRUCTION) SCHEDULE

This section requires information on any uncompleted implementation schedule which may have been imposed for construction of waste abatement facilities. Such requirements and implementation schedules may have been established by local, State, or Federal agencies or by court action. In addition to completing the following items, a copy of an official implementation schedule should be attached to this application. IF YOU ARE SUBJECT TO SEVERAL DIFFERENT IMPLEMENTATION SCHEDULES, EITHER BECAUSE OF DIFFERENT LEVELS OF AUTHORITY IMPOSING DIFFERENT SCHEDULES (Item 1a.) AND/OR STAGED CONSTRUCTION OF SEPARATE OPERATION UNITS (Item 1c), SUBMIT A SEPARATE SECTION III FOR EACH ONE.

1. Improvements

a. Discharge Serial Number

Affected List the discharge serial numbers, assigned in Section II, that are covered by this implementation schedule.

300

301a

FOR AGENCY USE	
SCHED. NO.	_____

N/A

b. Authority Imposing Requirements Check the appropriate item indicating the authority for implementation schedule. If the identical implementation schedule has been ordered by more than one authority, check the appropriate items. (see instructions)

Locally developed plan

Areawide Plan

Basic Plan

State approved implementation schedule

Federal approved water quality standards implementation plan.

Federal enforcement procedure or action

State court order

Federal court order

301b

☐ LOC

☐ ARE

☐ BAS

☐ SQS

☐ WQS

☐ ENF

☐ CRT

☐ FED

N/A

c. Facility Requirement. Specify the 3-character code of those listed below that best describes in general terms the requirement of the implementation schedule and the applicable six-character abatement code(s) from Table II of the instruction booklet. If more than one schedule applies to the facility because of a staged construction schedule, state the stage of construction being described here with the appropriate general action code. Submit a separate Section III for each stage of construction planned.

301c

3-character (general)

_____ N/A

301d

6-character (specific) (see Table II)

_____ N/A

New Facility

Modification (no increase in capacity or treatment)

Increase in Capacity

Increase in Treatment Level

Both Increase in Treatment Level and Capacity

Process Change

Elimination of Discharge

NEW

MOD

INC

INT

ICT

PRO

ELI

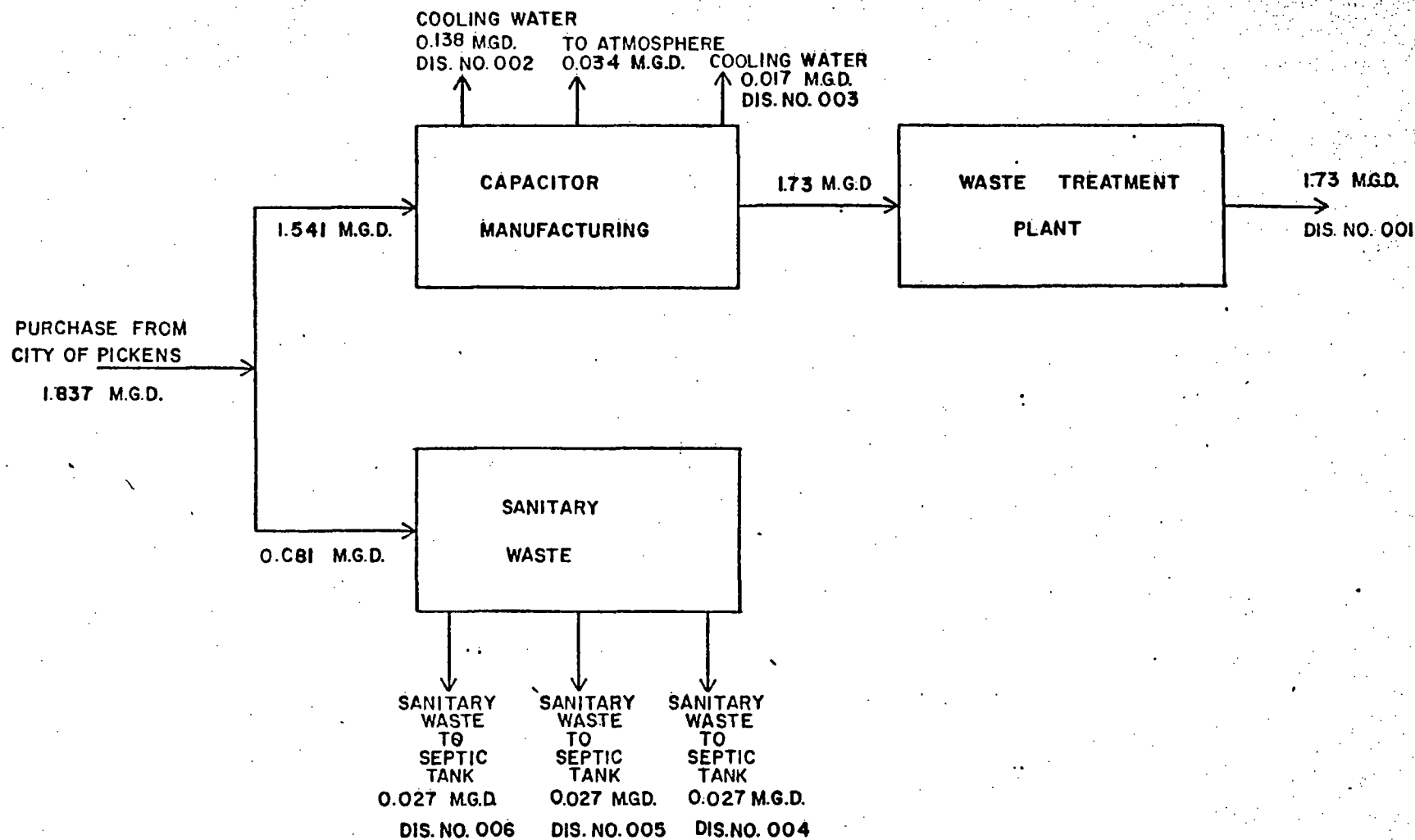
2. Implementation Schedule and 3. Actual Completion Dates.

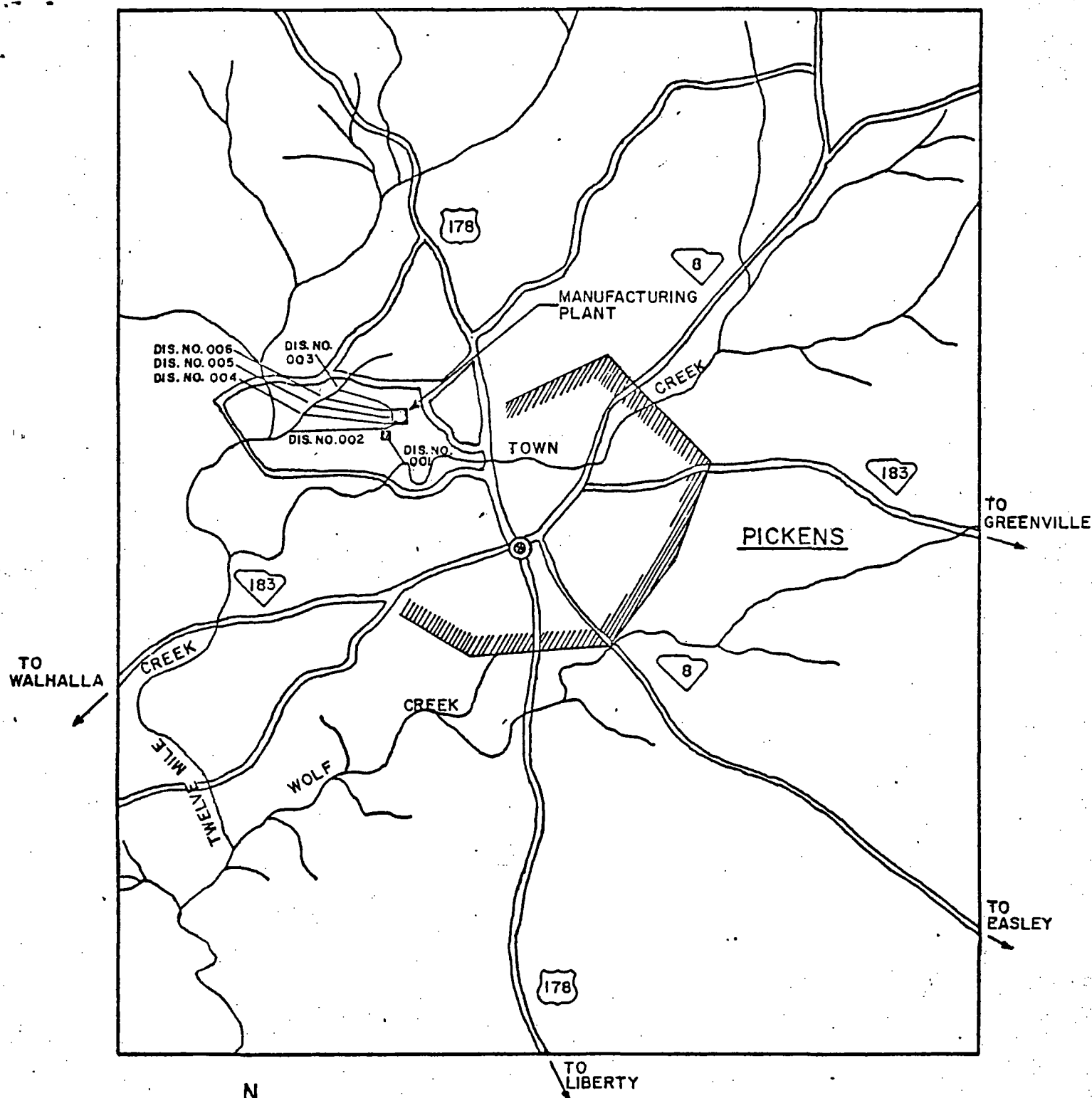
Provide dates imposed by schedule and any actual dates of completion for implementation steps listed below. Indicate dates as accurately as possible. (see instructions)

Implementation Steps	2. Schedule (Yr./Mo./Day)	3. Actual Completion (Yr./Mo./Day)
a. Preliminary plan complete	302a _____/_____/_____	303a _____/_____/_____
b. Final plan submission	302b _____/_____/_____	303b _____/_____/_____
c. Final plan complete	302c _____/_____/_____	303c _____/_____/_____
d. Financing complete & contract awarded	302d _____/_____/_____	303d _____/_____/_____
e. Site acquired	302e _____/_____/_____	303e _____/_____/_____
f. Begin action (e.g., construction)	302f _____/_____/_____	303f _____/_____/_____
g. End action (e.g., construction)	302g _____/_____/_____	303g _____/_____/_____
h. Discharge Began	302h _____/_____/_____	303h _____/_____/_____
i. Operational level attained	302i _____/_____/_____	303i _____/_____/_____

N/A

SC 0000141





Scale: 1" = 1 mi.

"LOCATION MAP"
 FROM GENERAL HIGHWAY MAP
 PICKENS COUNTY, S.C. 1957
 SANGAMO ELECTRIC COMPANY
 PICKENS COUNTY, S.C.
 APRIL 23, 1974 PAGE 1 OF 1

7

SPECIAL CONDITIONS FOR REFUSE ACT PERMIT

DRAFT

Date 9 May 1974DYN 036Sangre Electric
Vickburg, SCPERMIT DURATION: 5 yrs.RECEIVING WATER: Long CreekAPPLICATION DATED: 22 April 1974PRODUCTION LEVEL: 150,000 of capacitors/day

MONITORING REPORTING DATES:

EFFLUENT LIMITS & MONITORING:

After the date of issuance of this permit, the effluent characteristics shall not exceed the values listed below:

Discharge Serial No.	Parameter	EFFLUENT LIMITS			MONITORING REQUIREMENTS	
		Average Quantity (lbs/day)	Maximum Quantity (lbs/day)	Other Limits Avg Max	Minimum Analysis Freq.	Sample Type
001	flow			MGD 1.575 4.18	daily	Cont. rec.
	pH			4.5 - 9.0	"	"
	BOD ₅	66	263	5.0 mg/l 20	1/mo	24 hr. comp.
	TSS	394	657	20 mg/l 50	"	"
	Ammonia	1.31	13.1	.1 mg/l 1.0	"	"
	Cyanide	.657	6.57	.05 mg/l .5	"	"
	Aluminum	2.36	13.1	.15 mg/l 1.0	"	"
	Copper	.131	6.57	.01 mg/l .5	"	"
	Nickel	.526	6.57	.04 mg/l .5	"	"
	Oil & Grease	223	552	17 mg/l 42	"	grab
	PCB's	11 Non-	detectable		"	24 hr. comp.
003	flow			MGD .017 .05	daily	Flow Ind.
Blue it;	pH			5.3 - 9.0	"	grab
002 follows	BOD ₅	.709	1.42	5 mg/l 10	2/mo	24 hr. comp.
	TSS	2.27	4.26	16 mg/l 30	"	"

SPECIAL CONDITIONS FOR REFUSE ACT PERMIT

DRAFT

Date 9 May 197404N 036Sageam Electric
Pickens, SC

PERMIT DURATION:

RECEIVING WATER:

APPLICATION DATED:

PRODUCTION LEVEL:

MONITORING REPORTING DATES:

EFFLUENT LIMITS & MONITORING:

After the date of issuance of this permit, the effluent characteristics shall not exceed the values listed below:

Discharge Serial No.	Parameter	EFFLUENT LIMITS				MONITORING REQUIREMENTS	
		Average Quantity (lbs/day)	Maximum Quantity (lbs/day)	Other Limits Avg Max		Minimum Analysis Freq.	Sample Type
<u>NOE 003</u>	Ammonia	.014	.142	.1	mg/l 1.	2/month	24 hr. comp.
	Aluminum	.007	.071	.05	mg/l .5	"	"
	Oil + Grease	1.56	2.84	"	mg/l 20	"	grab
	PCB's	Non-detectable				"	24 hr. comp.
<u><u>NOE 002</u></u>	flow			.138	MGD .200	daily	Cont. Rec.
	pH			5.1 - 9.0		"	"
	BOD ₅	5.76	11.52	5	mg/l 10	1/week	24 hr. comp.
	TSS	14.63	34.55	12.7	mg/l 30	"	"
	Ammonia	0.115	1.152	.1	mg/l 1.	"	"
	Aluminum	.115	.576	.1	mg/l .5	"	"
	Oil + Grease	69.1	115.2	60	mg/l 100	"	grab
	PCB's	Non-detectable				"	24 hr. comp.

SPECIAL CONDITIONS FOR REFUSE ACT PERMIT

DYN 036

Sungam Electric
Pickens, SC

DRAFT

Date 9 May 1974

IMPLEMENTATION SCHEDULE:

1. Submit by:

Demonstrate achievement of following effluent limits by:

OR 2. Comply with the following dates to meet the following list of effluent limits:

- a. Completion of preliminary plans _____
- b. Final plans _____
- c. Financing arrangements _____
- d. Acquisition of site _____
- e. Contract awarded _____
- f. Commencement of construction _____
- g. Operational level attained _____

MONITORING
REQUIREMENTS

EFFLUENT LIMITS

Discharge Serial No.	Parameter	EFFLUENT LIMITS		Other Limits		Minimum Analysis Freq.	Sample Type
		Average Quantity (lbs/day)	Maximum Quantity (lbs/day)	Avg	Max		
001	pH			6.0-9.0			
	Cyanide		1.514	mg/l			
	Aluminum		5.25	mg/l	.40		
	Copper		.656	mg/l	.05		
	Oil & Grease	131.	197	10 mg/l	15		
002	pH			6.0-9.0			
	Aluminum		.461	mg/l	.40		
	Oil & Grease	11.52	17.27	10 mg/l	15		
003	pH			6.0-9.0			
	Aluminum		.057	mg/l	.40		
	Oil & Grease	1.42	2.13	10 mg/l	15		

Rationale

Sangano Electric Pickers

04N 036

total effluent 1.75 MGD
Stream flow 1.25 MGD } dilution factor .723:1

INTERIM BPT req.

use 2x for max.

CN⁻ .05 ppm

Al .2 ppm

Ca .2 "

K₂ .10 "

8

13 May 1974

NAME

REPRESENTING

Mike Donohoe

EPA

R. L. Lowell

DAVIS & Floyd Inc.

GREENWOOD, S.C.

Robert Asmus

SANGAMO Elec. Co.

L. Maynard Duffie

Pickens, Ind. Rel. Mfg.
Thompson, Ogletree & Decker

Sargamo Electric

13 May 1974

Not bad except for max and Oil + Grease -

They checked back and found some poor housekeeping, will correct.

Monitoring -

BCB's -

When toxic guidelines come out, they will have to comply, can't tell what numbers will be.

TSS -

Their big concern: 10-15 on first draft, but revision and different classification allows for 30-45.

Aluminum -

002 - not from H_2O_2

Copper and CN^- -

Monitoring 003 - do we need to have it? Yes.

9



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309 4AEW:JCL

18 JUL 1974


Mr. Robert Asmus
Industrial Relations Manager
Highway 190 (Sangamo Road)
P. O. Box 128
Pickens, South Carolina 29671

Re: Pickens Plant
SC 074 OYN 2 000036

Gentlemen:

Enclosed are the public notice and fact sheet, if applicable, for your NPDES permit. If any conditions of the permit have changed from those of the draft permit previously sent to you, a draft permit is also enclosed. If you have any questions, please feel free to call me at (404) 526-3971.

Sincerely,


John C. Lank, Jr., P.E.
State Coordinator SC/KY

Enclosures

cc: Mr. Charles Jeter
South Carolina Department of Health
and Environmental Control

JCLank;dmj;rm 307;3971;7/18/74

U.S. Environmental Protection Agency
Region IV, Permit Branch
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309
404/526-5201

Project File

Donehoo

in conjunction with

The South Carolina Dept. of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29211

Public Notice No. 75SC0005

803/758-5483

July 18, 1974

NOTICE OF APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AND NOTICE OF PROPOSED STATE CERTIFICATION Sangamo Electric Company, Capacitor Division, Pickens Plant, P. O. Box 128, Pickens, South Carolina 29671, application no. SC 074 OYN 2 000036, has applied for an NPDES permit to discharge wastewater to Town Creek and an unnamed tributary to Twelve Mile Creek. The applicant is engaged in the manufacture of capacitors and electrolytes. Three discharges are described in the application, as follows: discharge 001 enters Town Creek 61 m (200 ft.) upstream of the Highway 23 bridge, and 002 and 003 enter the unnamed tributary 2515 m (8250 ft.) and 3220 m (10,560 ft.) from the confluence with Twelve Mile Creek.

On the basis of preliminary staff review and application of 86 Stat. 816, 33 U.S.C. 1251 et seq. (1972), 38 Fed. Reg. 13527 et seq. and other lawful standards and regulations, the U.S. Environmental Protection Agency (EPA) proposes to issue a permit to discharge subject to specific pollutant limitations and special conditions. These proposed determinations are tentative.

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPA address above, no later than August 19, 1974. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit application number should be placed on the envelope next to the above address and also at the top of the first page of comments. A public hearing may be held where the EPA Regional Administrator finds a significant degree of public interest in a proposed permit or group of permits.

A fact sheet containing additional details about the application and the proposed determinations, a sketch showing the exact location of the discharge, and additional information on hearing procedure is available by writing or calling EPA. A copy of the draft permit is also available from EPA. The application, comments received, and other information are available for review and copying at Room 309, 1421 Peachtree Street, Atlanta, Georgia, between the hours of 8:15 a.m. and 4:30 p.m., Monday through Friday. A copying machine is available for public use at a charge of 20¢ per page. Information is also available from the S.C.D.H.E.C. office in Columbia.

The South Carolina Dept. of Health and Environmental Control has proposed to certify the discharge in accordance with the provisions of Section 401 of the Federal Water Pollution Control Act, as amended (P.L. 92-500). Persons wishing to comment upon or object to state certification are invited to submit same in writing to the state agency address above no later than August 19, 1974. If a public hearing is held, as described above, the state agency will co-chair the hearing in order to receive comments relative to state certification.

Please bring the foregoing to the attention of persons who you know will be interested in this matter.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

FACT SHEET

APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
TO U.S. WATERS

Application No. SC-074-OYN-2-000036

Date July 18, 1974

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Sangamo Electric Company
P. O. Box 128
Pickens, South Carolina 29671

b. Description of Applicant's Operation

Manufacture of capacitors and electrolytes

c. Production Capacity of Facility

150,000 pieces/day

d. Applicant's Receiving Waters

Town Creek

For a sketch showing the location of the discharge(s), see
Attachment A.

e. Description of Existing Pollution Abatement Facilities

Wastewater flows through trap into neutralization chamber for
pH correction, then to lagoon with 5-day retention time and
mechanical aeration.

f. Description of Discharges (as reported by applicant)

Serial 001 - process wastewater and storm runoff

Average Flow - 5961 m³/day (1.575 MGD)
 Average Winter Temperature - 15.6°C (60°F)
 Average Summer Temperature - 23.9°C (75°F)
 pH Range (std. units) - 4.5-8.0

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>	
	<u>kg/day (lbs/day)</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>
BOD ⁵	29.9 (66)	120 (263)
TSS	179 (394)	298 (657)
Ammonia	.594 (1.31)	5.94 (13.1)
Cyanide	.298 (.657)	2.98 (6.57)
Aluminum	1.07 (2.36)	5.94 (13.1)
Copper	.0594 (.131)	2.98 (6.75)
Nickel	.239 (.526)	2.98 (6.75)
Oil and Grease	101 (223)	250 (552)

Serial 002 - Cooling Water

Average Flow - 522 m³/d (.138 MGD)
 Average Winter Temperature - 21°C (70°F)
 Average Summer Temperature - 21°C (70°F)
 pH Range (std. units) - 5.1 - 6.7

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>	
	<u>kg/day (lbs/day)</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>
BOD ⁵	2.61 (5.76)	5.22 (11.52)
TSS	6.64 (14.63)	15.67 (34.55)
Ammonia	.052 (.115)	.521 (1.15)
Aluminum	.052 (.115)	.261 (.576)
Oil and Grease	31.3 (69.1)	52.25 (115.2)

Serial 003 - Cooling Water

Average Flow - 6435 m³/d (.017 MGD)
Average Winter Temperature - 21°C (70°F)
Average Summer Temperature - 21°C (70°F)
pH Range (std. units) - 5.3 - 9.0

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>	
	<u>kg/day (lbs/day)</u>	<u>kg/day (lbs/day)</u>
	<u>Daily Average</u>	<u>Daily Maximum</u>
BOD ⁵	.322 (.709)	.643 (1.42)
TSS	1.03 (2.27)	1.93 (4.26)
Ammonia	.006 (.014)	.064 (.142)
Aluminum	.003 (.007)	.032 (.071)
Oil and Grease	.707 (1.56)	1.29 (2.84)

2. PROPOSED EFFLUENT LIMITATIONS

Serial 001 - Process Wastewater and Storm Runoff

Permitted pH Range (std. units) - 6.0 - 9.0

<u>Effluent Characteristic</u>	<u>Discharge Limitation</u> <u>in kg/day (lbs/day)</u>	
	<u>Daily</u>	<u>Daily</u>
	<u>Average</u>	<u>Maximum</u>
BOD ₅	29.9 (66)	120 (263)
TSS	179 (394)	298 (657)
Ammonia	.594 (1.31)	5.94 (13.1)
Cyanide	1.07 (2.36)	2.38 (5.25)
Aluminum	.0594 (.131)	.298 (.656)
Copper	.239 (.526)	2.98 (6.57)
Nickel	59.4 (131)	89.4 (197)
Oil & Grease		

Serial 002 - Cooling Water

Permitted pH Range (std. units) - 6.0 - 9.0

<u>Effluent Characteristic</u>	<u>Discharge Limitation</u> <u>in kg/day (lbs/day)</u>	
	<u>Daily</u>	<u>Daily</u>
	<u>Average</u>	<u>Maximum</u>
BOD ₅	2.61 (5.76)	5.22 (11.52)
TSS	6.64 (14.63)	15.67 (34.55)
Ammonia	.052 (.115)	.521 (1.15)
Aluminum	.052 (.115)	.209 (.461)
Oil & Grease	5.22 (11.52)	7.84 (17.27)

Serial003 - Cooling Water

Permitted pH Range (std. units) - 6.0 - 9.0

<u>Effluent Characteristic</u>	<u>Discharge Limitation</u>	
	<u>in kg/day (lbs/day)</u>	
	<u>Daily</u> <u>Average</u>	<u>Daily</u> <u>Maximum</u>
BOD ₅	.322 (.709)	.643 (1.42)
TSS ₅	1.03 (2.27)	1.93 (4.26)
Ammonia	.006 (.014)	.064 (.142)
Aluminum	.003 (.007)	.026 (.057)
Oil & Grease	.644 (1.42)	.966 (2.13)

3. MONITORING REQUIREMENTS

The applicant will be required to monitor regularly for flow and those parameters limited in Section 2 above with sufficient frequency to ensure compliance with the permit conditions. Frequency, methods of sampling, and reporting dates will be specified in the final permit.

4. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

Submit Preliminary Engineering Report October 1, 1974

Submit Final Plans January 1, 1975

Begin Construction July 1, 1975

Attain Compliance January 1, 1976

5. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Any pesticide or algicide discharge from any point source shall comply with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.) and the use of such pesticide shall be in manner consistent with its labeling.

6. WATER QUALITY STANDARDS AND EFFLUENT STANDARDS APPLIED TO THE DISCHARGE

The limitations of this permit are based on the Best Practicable Control Technology Currently Available, and will insure that the water quality standards set for the receiving streams by the State of South Carolina. The receiving streams are classified as suitable for domestic use after complete treatment.

7. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Environmental Protection Agency proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Interested persons are invited to submit written comments on the permit application or on EPA's proposed determinations to the following address:

Water Enforcement Branch
Environmental Protection Agency
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

All comments received prior to August 19, 1974, will be considered in the formulation of final determinations with regard to this application.

b. Public Hearing

The Regional Administrator may hold a public hearing if there is a significant degree of public interest in a proposed permit or group of permits. Public notice of such a hearing will be circulated in newspapers in the geographical area of the discharge and to those on the EPA mailing list at least thirty days prior to the hearing.

Following the public hearing, the Regional Administrator may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue or deny the permit. Notice of issuance or denial will be circulated to those who participated in the hearing and to all appropriate persons on the EPA mailing list. If the permit is issued, it will become effective 30 days following date of issuance and will be the final action of EPA unless an adjudicatory hearing is granted.

c. Adjudicatory Hearings

Any person may submit, prior to the expiration of the comment period specified above, or, if a public hearing is held, within 20 days of the date of the notice of issuance or denial of the permit, a request for an adjudicatory hearing to consider the proposed permit and its conditions. If the request is granted, any person may submit a request to be a party to such a hearing within 30 days of public notice of the hearing.

Requests for an adjudicatory hearing and requests to be a party to such a hearing shall:

1. State the name and address of the person making such request;
2. Identify the interest of the requester, and any person represented by issuance or nonissuance of the permit;
3. Identify any other persons whom the requester represents;
4. Include an agreement by the requester, and any person represented by the requester, to be subject to examination and cross-examination, and in the case of a corporation, to make any employee available for examination and cross-examination at his own expense, upon the request of the presiding officer, on his own motion or on the motion of any party.

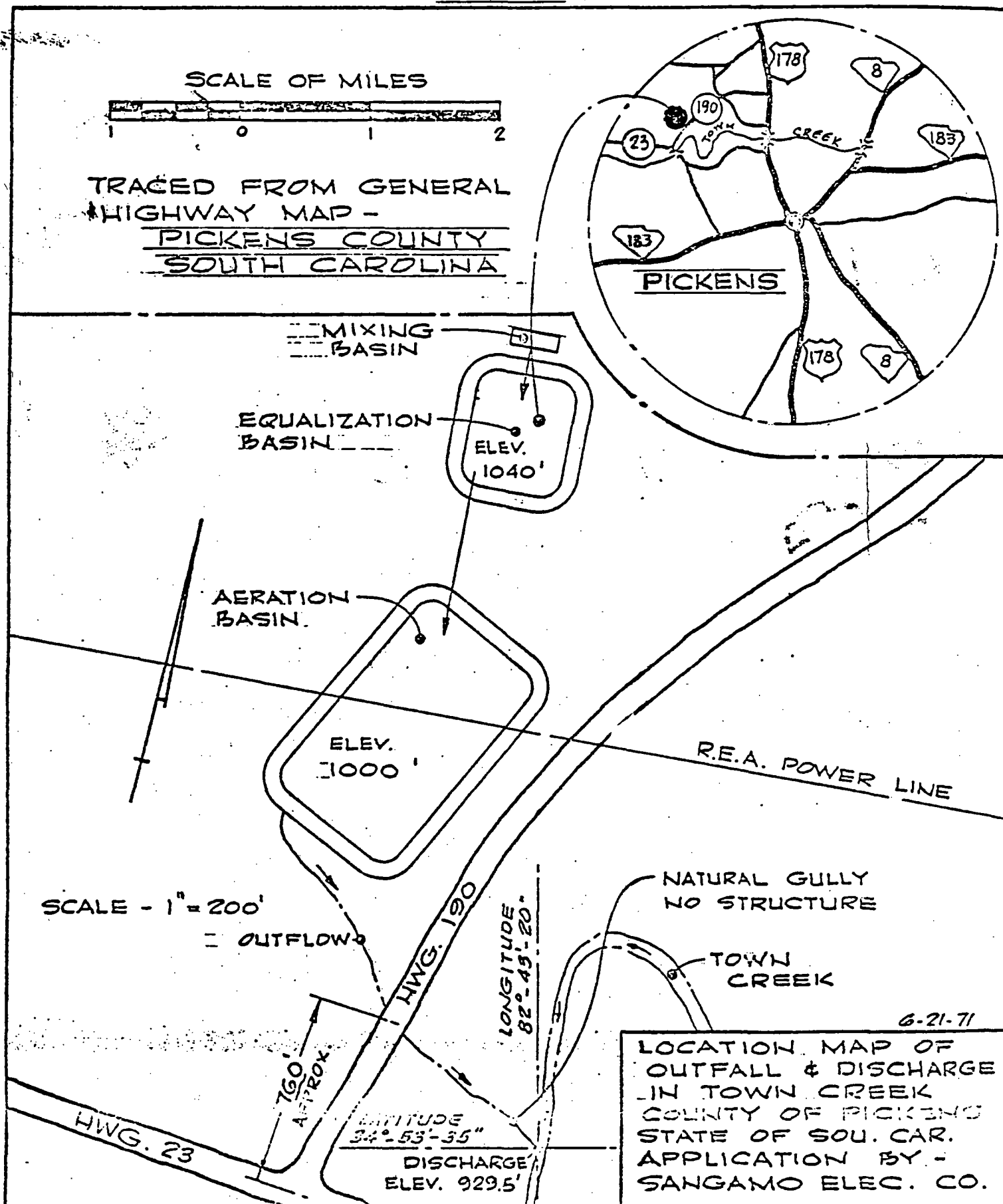
In addition, any request for an adjudicatory hearing shall state with particularity the reasons for the request, the issues proposed to be considered at the hearing, and the position of the requester on the issues to be considered.

Final issuance of the permit following an adjudicatory hearing will be in accordance with 40 CFR 125.34(c).

d. Issuance of the Permit when no Hearings are Held

If no public hearing or adjudicatory hearing is held, and, after review of the comments received, EPA's determinations are substantially unchanged, the permit will issue and become effective immediately. This will be the final action of the Environmental Protection Agency.

If no hearings are held, but there have been substantial changes, public notice of EPA's revised determinations will be made. Following a 30-day comment period, the permit will issue and become effective immediately and will be the final action of EPA, unless a public or adjudicatory hearing is granted.



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Permit No. SC0000141

Application No. SC 074 OYN 2 000036

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Sangamo Electric Company, Capacitor Division

is authorized to discharge from a facility located at

Pickens, Pickens County, South Carolina

to receiving waters named

Town Creek and an unnamed tributary to Twelve
Mile Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth
in Parts I, II, and III hereof.

This permit shall become effective on November 4, 1974.

This permit and the authorization to discharge shall expire at midnight, November 4, 1979.

Signed this 19th day of September, 1974.

for John C. White
Regional Administrator

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through December 31, 1975, the permittee is authorized to discharge from outfall(s) serial number(s) 001

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
BOD ₅	29.9 (66)	120 (263)	—	60 mg/l*	1/week	24 hr. composite
Total Suspended Solids	179 (394)	298 (657)	—	—	1/week	24 hr. composite
Ammonia	.594 (1.31)	5.94 (13.1)	—	—	1/week	24 hr. composite
Cyanide	.298 (.657)	2.98 (6.57)	—	.1 mg/l*	1/week	24 hr. composite
Aluminum	1.07 (2.36)	5.94 (13.1)	—	1.5 mg/l*	1/week	24 hr. composite
Copper	.0594 (.131)	2.98 (6.57)	—	1.5 mg/l*	1/week	24 hr. composite
Nickel	.239 (.526)	2.98 (6.57)	—	1.5 mg/l*	1/week	24 hr. composite
Oil and Grease	101 (223)	250 (552)	—	—	1/week	Grab
Polychlorinated Biphenyls	—	—	—	—	1/week	24 hr. composite

The pH shall not be less than 4.5 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at or near the outfall.

*Required as part of State Certification.

2. During the period beginning January 1, 1976 and lasting through expiration date, the permittee is authorized to discharge from outfall(s) serial number(s) 001

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
BOD ₅	29.9 (66)	120 (263)	—	60 mg/l*	1/week	24 Hour Composite
Total Suspended Solids	179 (394)	298 (657)	—	—	1/week	24 Hour Composite
Ammonia	.594 (1.31)	5.94 (13.1)	—	—	1/week	24 Hour Composite
Cyanide	.298 (.657)	.596 (1.314)	—	.1 mg/l*	1/week	24 Hour Composite
Aluminum	1.07 (2.36)	2.38 (5.25)	—	1.5 mg/l*	1/week	24 Hour Composite
Copper	.0594 (.131)	.298 (.656)	—	1.5 mg/l*	1/week	24 Hour Composite
Nickel	.239 (.526)	2.98 (6.57)	—	1.5 mg/l*	1/week	24 Hour Composite
Oil and Grease	59.4 (131)	89.4 (197)	—	—	1/week	Grab
Polychlorinated Biphenyls	—	—	—	—	1/week	24 Hour Composite

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
at or near the outfall.

*Required as part of State Certification.

2. During the period beginning effective date and lasting through December 31, 1975, the permittee is authorized to discharge from outfall(s) serial number(s) 002

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
BOD ₅	2.61 (5.76)	5.22 (11.52)	—	20 mg/l*	1/week	24 Hour Composite
Total Suspended Solids	6.64 (14.63)	15.67 (34.55)	—	—	1/week	24 Hour Composite
Ammonia	.052 (.115)	.521 (1.15)	—	—	1/week	24 Hour Composite
Aluminum	.052 (.115)	.261 (.576)	—	1.5 mg/l*	1/week	24 Hour Composite
Oil and Grease	31.3 (69.1)	52.25 (115.2)	—	—	1/week	Grab
Polychlorinated Biphenyls	—	—	—	—	1/week	24 Hour Composite

The pH shall not be less than 5.1 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at or near the outfall.

*Required as part of State Certification.

2. During the period beginning January 1, 1976 and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 002

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	daily	continuous recorder
BOD ₅	2.61 (5.76)	5.22 (11.52)	—	20 mg/l*	1/week	24-hr. composite
TSS	6.64 (14.63)	15.67 (34.55)	—	—	1/week	24-hr. composite
Ammonia	.052 (.115)	.521 (1.15)	—	—	1/week	24-hr. composite
Aluminum	.052 (.115)	.209 (.461)	—	1.5 mg/l*	1/week	24-hr. composite
Oil & Grease	5.22 (11.52)	7.84 (17.27)	—	—	1/week	grab
Polychlorinated Biphenyls	non-detectable		—	—	1/week	24-hr. composite
The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.						

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
at or near the outfall.

*Required as part of State Certification.

2. During the period beginning effective date and lasting through December 31, 1975 the permittee is authorized to discharge from outfall(s) serial number(s) 003

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	daily	flow indicator
BOD ₅	.322 (.709)	.643 (1.42)	—	20 mg/l*	2/month	24-hr. composite
TSS	1.03 (2.27)	1.93 (4.26)	—	—	2/month	24-hr. composite
Ammonia	.006 (.014)	.064 (.142)	—	—	2/month	24-hr. composite
Aluminum	.003 (.007)	.032 (.071)	—	1.5 mg/l*	2/month	24-hr. composite
Oil & Grease	.707 (1.56)	1.29 (2.84)	—	—	2/month	grab
Polychlorinated Biphenyls	non-detectable		—	—	2/month	24-hr. composite

The pH shall not be less than 5.3 standard units nor greater than 9.0 standard units and shall be monitored daily by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
at or near the outfall.

*Required as part of State Certification.

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2. During the period beginning January 1, 1976 and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 003

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	daily	flow indicator
BOD ₅	.322 (.709)	.643 (1.42)	—	20 mg/l*	2/month	24-hr. composite
TSS	1.03 (2.27)	1.93 (4.26)	—	—	2/month	24-hr. composite
Ammonia	.006 (.014)	.064 (.142)	—	—	2/month	24-hr. composite
Aluminum	.003 (.007)	.026 (.057)	—	1.5 mg/l*	2/month	24-hr. composite
Oil & Grease	.644 (1.42)	.966 (2.13)	—	—	2/month	grab
Polychlorinated Biphenyls	non-detectable		—	—	2/month	24-hr. composite
The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by grab sample.						

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
at or near the outfall.

*Required as part of State Certification.

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B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Submit Preliminary Engineering Report. November 1, 1974

Submit Final Plans January 1, 1975

Begin Construction July 1, 1975

Attain Compliances January 1, 1976

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

C. MONITORING AND REPORTING

1. *Representative Sampling*

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. *Reporting*

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on September 28, 1974. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

Environmental Protection Agency
Water Enforcement Branch
1421 Peachtree Street, N.E.
Atlanta, Georgia

South Carolina Depart. of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29211

3. *Definitions*

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

4. *Test Procedures*

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required.

5. *Recording of Results*

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;

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d. The analytical techniques or methods used; and

e. The results of all required analyses.

6. *Additional Monitoring by Permittee*

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

7. *Records Retention*

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State water pollution control agency.

A. MANAGEMENT REQUIREMENTS**1. *Change in Discharge***

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. *Noncompliance Notification*

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. *Facilities Operation*

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. *Adverse Impact*

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. *Bypassing*

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass.

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6. *Removed Substances*

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. *Power Failures*

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

- b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. *Right of Entry*

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. *Transfer of Ownership or Control*

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency.

3. *Availability of Reports*

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public

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inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

4. *Permit Modification*

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. *Toxic Pollutants*

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. *Civil and Criminal Liability*

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. *Oil and Hazardous Substance Liability*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. *State Laws*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

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9. *Property Rights*

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. *Severability*

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

OTHER REQUIREMENTS

For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.

If continuous monitoring equipment is not installed on the effective date of the permit then the requirement will be waived until such equipment can be installed; up to a period of 6 months. During this period the requirement can be met by a representative instantaneous sample. Applicant will furnish monthly progress reports until the required equipment is installed.

11

NPDES VIOLATION REPORT

Date(s) of violation(s) 12/1-3/1

Name of Permittee Sangamo Electric Co. NPDES No. SC 0000141
City Pickens State S.C. Zip 29671

Type of Violation:

- | | |
|----------------------------|-----------------------------|
| 1. Failure to Report: | 2. Schedule non-compliance |
| a. Implementation Schedule | 3. Effluent limits <u>✓</u> |
| b. Self-monitoring data | 4. Other |
| c. Non-compliance | |

Source of Data:

- | | |
|-----------------------------|--------------------|
| 1. Non-compliance report | 4. S & A Survey |
| 2. Schedule report | 5. State Survey |
| 3. Self-monitoring <u>✓</u> | 6. Citizens report |
| | 7. Other |

Extent of Violation

Condition	Required	Actual	% Variation	% Analytical Error
001 BODs avg	66	74	12%	+50
con. Aluminum max.	1.5	3.5	133%	+100

Was State Agency consulted? Yes ✓ No ✓ Comments: (over) Flow Not Reported

Previous violations NO What SMR not sent Date 9/24 - Jan 1975 (Pending Review)

Was investigation made? Yes ✓ No ✓ Who Info Date Info

Additional Info. Required: Letter; Show Cause ✓; 308 Letter ✓

Recommended Disposition: No Action ✓; Notice of violation ✓; Administrative Order ✓

Civil Action ✓; Civil Penalty ✓; Criminal ✓

Permit Modification ✓

Rationale: 1st Report ~~late~~ Report flow

Final Disposition: No Action ✓; Cautionary Letter ✓; Administrative Order ✓

Civil Action ✓; Civil Penalty ✓; Criminal Fine ✓

Reviewer Bonnie Christianson State Coordinator J. L. Leland Legal Chas. H. Hines

<u>Condition</u>	<u>Required</u>	<u>Actual</u>	<u>% Variation</u>	<u>% Analytical error</u>
<u>002</u> pH	9.0	11.2	2.2	±.5
<u>003</u> pH	9.0	9.3	.3	±.5
<u>gun</u> BOD ₅ avg.	.709	2.7	280%	+50
" max.	1.42	5.9	315%	+50
<u>can</u> BOD max	20	21	5%	+50
oil + grease avg.	1.56	4.2	169%	+100
" max.	2.84	13	357%	+100

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Form Approved
OMB NO. 158-R0073

mg

INSTRUCTIONS

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
2. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(2-3) ST	(4-16) SC0000141 PERMIT NUMBER	(17-19) DIS	(17-19) SIC	(20-21) (22-23) (24-25) 7 4 1 2 1 YEAR MO DAY	(26-27) (28-29) (30-31) 7 5 3 1 YEAR MO DAY
		LATITUDE		LONGITUDE	

REPORTING PERIOD: FROM

Outfall 002

PARAMETER		(3 card only) QUANTITY (38-45) (46-53) (54-61)				UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) (46-53) (54-61)				UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	MINIMUM			AVERAGE	MAXIMUM						
pH	REPORTED	5.6	7.1	11.2	Stand	2						0	Daily	Grab.	
	PERMIT CONDITION	5.1	-	9.0											Daily
BOD ₅	REPORTED	1.5	4.5	8.8	lbs/day	0	1	3.3	7	mg/liter	0	Weekly	Comp. *		
	PERMIT CONDITION	-	5.76	11.52			-	-	20						Weekly
Total Suspended Solids	REPORTED	.26	1.45	8.8	lbs/day	0	.2	1.1	7	mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	-	14.63	34.55			-	-	-						Weekly
Ammonia	REPORTED	No Detectable Amount			lbs/day	0	No Detectable Amount				0	Weekly	Comp.		
	PERMIT CONDITION	-	.115	1.15			-	-	-						
Aluminum	REPORTED	No Detectable Amount			lbs/day	0	No Detectable Amount			mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	-	.115	.576			-	-	1.5						
Oil & Grease	REPORTED	.4	16.7	78	lbs/day	0	.3	11	49	mg/liter	0	Weekly	Grab.		
	PERMIT CONDITION	-	69.1	115.2			-	-	-						
Poly Chlorinated Biphenyls	REPORTED	.012	.022	.041	lbs/day	0	.007	.015	.030	mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	-	-	-											
	REPORTED														
	PERMIT CONDITION														

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER			DATE			I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Hydrick Julius C.			Group Vice President			7 5 3 2 5				
LAST	FIRST	MI	TITLE			YEAR	MO	DAY		

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE MONITORING REPORT

Form Approved
OMB NO. 158-R0073

and

INSTRUCTIONS

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
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8. Fold along dotted lines, staple and mail Original to office specified in permit.

(12-30)	(4-10)	(17-19)					
ST	SC0000141 PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE		
				(20-21) (22-23) (24-25)	(26-27) (28-29) (30-31)		
				7 4 1 2 1 YEAR MO DAY	TO 7 5 3 1 YEAR MO DAY		

REPORTING PERIOD: FROM
Outfall 003

PARAMETER		(3 card only) QUANTITY (38-45) (46-53) (54-61)					(4 card only) CONCENTRATION (62-69) (70-77) (78-85) (86-93)					(64-68) (69-70)	
		MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
pH	REPORTED	5.7	6.9	9.3	Stand. units	3	-	-	-		0	Daily	Grab
	PERMIT CONDITION	5.3	-	9.0			-	-	-				Daily
BOD ₅	REPORTED	.06	2.7	5.9	lbs/day	5	.2	10	21	mg/liter	1	2/month	Comp. *
	PERMIT CONDITION	-	.709	1.42			-	-	20				2/month
Total Suspended Solids	REPORTED	.06	.17	.5	lbs/day	0	.2	.65	2	mg/liter	0	2/month	Comp.
	PERMIT CONDITION		2.27	4.26			-	-	-				2/month
Ammonia	REPORTED	No Detectable Amount			lbs/day	0	No Detectable Amount				0	2/month	Comp.
	PERMIT CONDITION		.014	.142			-	-	-				2/month
Aluminum	REPORTED	No Detectable Amount			lbs/day	0	No Detectable Amount			mg/liter	0	2/month	Comp.
	PERMIT CONDITION	-	.007	.071			-	-	1.5				2/month
Oil & Grease	REPORTED	.8	4.2	13	lbs/day	2	3	15.4	47	mg/liter	0	2/month	Grab
	PERMIT CONDITION		1.56	2.84			-	-	-				2/month
Poly-Chlorinated Biphenyls	REPORTED	.002	.004	.007	lbs/day	4	.0007	.017	.026	mg/liter	4	2/month	Comp.
	PERMIT CONDITION	Non-Detectable					Non-Detectable						2/month
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER			DATE			I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.			 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT				
Hydrick	Julius	C.	Group Vice President			7	5	3							2	5
LAST	FIRST	MI	TITLE	YEAR	MO	DAY										

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Form Approved
OMB NO. 158-R0073

San gano Electric Co.
P.O. Box 125
Pickers, S.C. 29671

INSTRUCTIONS

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(2-3) ST	(4-16) SC0000141 PERMIT NUMBER	(17-19) DIS	SIC	(20-21) (22-23) (24-25) 7 4 1 2 1 YEAR MO DAY	(26-27) (28-29) (30-31) 7 5 3 1 YEAR MO DAY
REPORTING PERIOD: FROM		TO			

Outfall 001
(32-37)

PARAMETER		(3 card only) (38-43) QUANTITY (44-51)				UNITS	(62-63) (64-65) NO. EX	(4 card only) (46-53) CONCENTRATION (54-61)				(62-63) (64-65) NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM				MINIMUM	AVERAGE	MAXIMUM				
pH	REPORTED	5.7	6.9	9.0	stand. units	0	-	-	-	0	Daily	Grab		
	PERMIT CONDITION	4.5	-	9.0		-	-	-	Daily	Grab				
BOD ₅	REPORTED	32	74	176	lbs/day	1	4	10	23	0	Weekly	Comp. *		
	PERMIT CONDITION	-	66	263	-	-	-	60	mg/liter	Weekly	Comp.			
Total suspended solids	REPORTED	11	96	421	lbs/day	0	3.6	13.7	73.2	0	Weekly	Comp.		
	PERMIT CONDITION	-	394	657	-	-	-	-	mg/liter	Weekly	Comp.			
Ammonia	REPORTED	No Detectable Amount			lbs/day	0	No Detectable Amount			0	Weekly	Comp.		
	PERMIT CONDITION	-	1.31	13.1	-	-	-	-	mg/liter	Weekly	Comp.			
Cyanide	REPORTED	No Detectable Amount			lbs/day	0	No Detectable Amount			0	Weekly	Comp.		
	PERMIT CONDITION	-	.657	6.57	-	-	-	.1	mg/liter	Weekly	Comp.			
Aluminum	REPORTED	less 1.0	1.0	12.5	lbs/day	0	less .1	less .1	3.5	1	Weekly	Comp.		
	PERMIT CONDITION	-	2.36	13.1	-	-	-	1.5	mg/liter	Weekly	Comp.			
Oil & Grease	REPORTED	16.8	69	168	lbs/day	0	2.4	9.8	26	0	Weekly	Grab		
	PERMIT CONDITION	-	223	552	-	-	-	-	mg/liter	Weekly	Grab			
Poly Chlorinated Biphenyls	REPORTED	.168	.492	1.309	lbs/day	0	.026	.073	.171	0	Weekly	Comp.		
	PERMIT CONDITION	-	-	-	-	-	-	-	mg/liter	Weekly	Comp.			
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER			DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.							
Hydrick Julius C.		Group Vice President			7 5 3 2 5 YEAR MO DAY									
LAST FIRST MI		TITLE			YEAR MO DAY		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT							

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

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(2-3) ST	(4-16) SC0000141 PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
OUTFALL 003 REPORTING PERIOD: FROM					
		(20-21) YEAR 7 5	(22-23) MO 1 3	(24-25) DAY 1 1	TO
		(26-27) YEAR 7 5	(28-29) MO 1 5	(30-31) DAY 3 1	

PARAMETER		(3 card only) QUANTITY				UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION				(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
		(38-40) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(54-61)			(46-53) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(54-61)			
Flow	REPORTED	.0175	.035	.071	MG/Day	0	--	--	--	--	0	Daily	--	
	PERMIT CONDITION	--	--	--			--	--	--			--	--	
BOD ₅	REPORTED	.06	.70	1.0	LBS/Day	0	2	3	4	MG/Liter	0	2/MON.	Comp.	
	PERMIT CONDITION	--	.709	1.42			--	--	20			2/MON.	Comp.	
Total Suspended Solids	REPORTED	.01	.08	.15	LBS/Day	0	.20	.38	.60	MG/Liter	0	2/MON.	Comp.	
	PERMIT CONDITION	--	2.27	4.26			--	--	--			2/MON.	Comp.	
Ammonia	REPORTED	NDA	NDA	.068	LBS/Day	0	NDA	NDA	2	MG/Liter	0	2/MON.	Comp.	
	PERMIT CONDITION	--	.014	.142			--	--	--			2/MON.	Comp.	
Aluminum	REPORTED	NDA	NDA	NDA	LBS/Day	0	NDA	NDA	NDA	MG/Liter	0	2/MON.	Comp.	
	PERMIT CONDITION	--	.007	.071			--	--	1.5			2/MON.	Comp.	
Polychlorinated Biphenyls	REPORTED	Non-Detectable				0	--	--	--	--	0	2/MON.	Comp.	
	PERMIT CONDITION	Non-Detectable			--		--	--	--	--		2/MON.	Comp.	
Oil & Grease	REPORTED	.37	1.05	2.2	LBS/Day	0	1.3	4	7.2	MG/Liter	0	2/MON.	GRAB.	
	PERMIT CONDITION	--	1.56	2.84			--	--	--			2/MON.	GRAB.	
pH (One sample exception)	REPORTED	6.1	7.1	9.2	Stand.	1	--	--	--	Stand.		Daily	GRAB.	
	PERMIT CONDITION	5.3	--	9.0	Units		--	--	--	Units		Daily	GRAB.	
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER		DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.								
Hydrick Julius C		Group Vice President		7 5 1 6 2 0										
LAST FIRST MI		TITLE		YEAR MO DAY		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT								

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

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(12-30) ST	(14-16) SC0000141 PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
REPORTING PERIOD: FROM		(20-21) YEAR	(22-23) MO	(24-25) DAY	TO
OUTFALL 002		715	13	11	715 15 311
		YEAR	MO	DAY	YEAR MO DAY

PARAMETER		(3 card only) QUANTITY				NO. EX	(4 card only) CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	UNITS		MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	REPORTED	.089	.163	.240	MG/Day	0	--	--	--		0	Daily	--
	PERMIT CONDITION	--	--	--			--	--	--			--	--
BOD ₅	REPORTED	1.2	4.4	11.1	Lbs/Day	0	1	3	6	MG/Liter	0	Weekly	Comp.
	PERMIT CONDITION	--	5.76	11.52			--	--	20			Weekly	Comp.
Total Suspended Solids	REPORTED	.14	1.0	2.9	Lbs/Day	0	.1	1.0	2.4	MG/Liter	0	Weekly	Comp.
	PERMIT CONDITION	--	14.6	34.5			--	--	--			Weekly	Comp.
Ammonia	REPORTED	NDA	NDA	NDA	Lbs/Day	0	NDA	NDA	NDA	MG/Liter	0	Weekly	Comp.
	PERMIT CONDITION	--	.115	1.15			--	--	--			Weekly	Comp.
Aluminum	REPORTED	NDA	NDA	NDA	Lbs/Day	0	NDA	NDA	NDA	MG/Liter	0	Weekly	Comp.
	PERMIT CONDITION	--	.115	.576			--	--	1.5			Weekly	Comp.
Oil & Grease	REPORTED	2.5	6.0	13.4	Lbs/Day	0	2.0	4.1	7.2	MG/Liter	0	Weekly	Grab.
	PERMIT CONDITION		69.1	115.2			--	--	--			Weekly	Grab.
pH	REPORTED	5.1	6.96	8.2	Stand. Units		--	--	--	Stand. Units	0	Daily	Grab.
	PERMIT CONDITION	5.1	--	9.0			--	--	--			Daily	Grab.
Poly Chlorinated Biphenyls	REPORTED	.004	.018	.036	Lbs/Day	0	.002	.003	.004	MG/Liter	0	Weekly	Comp.
	PERMIT CONDITION						--	--	--			Weekly	Comp.
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER				DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.				SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	
Hydrick Julius C.		Group Vice President				715 16 20							
LAST FIRST MI		TITLE				YEAR MO DAY							

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

*Songano Elec,
Pickers*

cc
gh

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(12-31) ST	(14-16) SC0000141 PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
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REPORTING PERIOD: FROM
OUTFALL 001

(20-21) 7 YEAR	(22-23) 13 MO	(24-25) 1 DAY	TO	(26-27) 7 YEAR	(28-29) 15 MO	(30-31) 31 DAY
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PARAMETER		(3 card only) QUANTITY (38-45) (46-53) (54-61)				UNITS	NO. EX	(4 card only) CONCENTRATION (46-53) (54-61)				UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	MINIMUM			AVERAGE	MAXIMUM						
Flow	REPORTED	.18	.63	1.25	MG/DAY	0	--	--	--	--	--	Daily	--		
	PERMIT CONDITION	--	--	--			--	--	--	--	--	--	--		
BOD ₅	REPORTED	6.2	34.2	77.0	LBS/DAY	0	2.0	5.1	10.1	Mg/Liter	0	Weekly	Comp.*		
	PERMIT CONDITION	--	66.0	263.0			--	--	60.0			Weekly	Comp.		
Total Suspended Solids	REPORTED	21	128	271	LBS/DAY	0	7.8	19.2	37.0	Mg/Liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	394	657			--	--	--			Weekly	Comp.		
Ammonia	REPORTED	1	0	1	LBS/DAY	0	1	0	1	Mg/Liter		Weekly	Comp.		
	PERMIT CONDITION	--	1.31	13.1			--	--	--			Weekly	Comp.		
Cyanide	REPORTED	NDA	NDA	NDA	LBS/DAY	0	NDA	NDA	NDA	Mg/Liter		Weekly	Comp.		
	PERMIT CONDITION	--	.657	6.57			--	--	.1			Weekly	Comp.		
Aluminum, Copper & Nickel	REPORTED	NDA	NDA	NDA			NDA	NDA	NDA			Weekly	Comp.		
	PERMIT CONDITION	--	--	--			--	--	--			Weekly	Comp.		
Oil & Grease	REPORTED	9.1	56.3	356	LBS/DAY	0	2.5	8.3	50.3	Mg/Liter	0	Weekly	Grab.		
	PERMIT CONDITION	--	223	552			--	--	--			Weekly	Grab.		
pH / Poly Chlorinated Biphenyls	REPORTED	6.3/.014	7.6/.24	9.0/.936	Stand units/	0	-- / .007	-- / .041	-- / .105	Stand units/	0/0	Weekly	Grab./		
	PERMIT CONDITION	4.5/--	--/--	9.0/--	Lbs/Day		--/--	--/--	--/--	Mg/Liter		Daily/	Grab./		
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER		DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.						SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			
Hydrick Julius C.		Group Vice President		7 15 16 20											
LAST FIRST MI		TITLE		YEAR MO DAY											

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Approved
OMB NO. 158-R0073

*Sangamo Electric
P.O. Box 128
Pickens, S.C.*

CODE

INSTRUCTIONS

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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
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(2-3) ST	(14-18) 0000141 PERMIT NUMBER	(17-19) DIS	(20-21) SIC	(22-23) LATITUDE	(24-25) LONGITUDE
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REPORTING PERIOD: FROM

OUTFALL 001

(20-21) 7	(22-23) 5	(24-25) 6	(26-27) 1
YEAR	MO	DAY	

TO

(26-27) 7	(28-29) 5	(30-31) 8	(32-33) 3	(34-35) 1
YEAR	MO	DAY		

PARAMETER		(3 card only) QUANTITY				(4 card only) CONCENTRATION						FREQUENCY OF ANALYSIS	SAMPLE TYPE
		(38-48) MINIMUM	(48-52) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(38-48) MINIMUM	(48-52) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX		
Flow (MGD)	REPORTED	.010	.807	1.348	(MGD)	0	--	--	--	--	0	Daily	--
	PERMIT CONDITION	--	--	--			--	--	--		--	--	
BOD ₅	REPORTED	.21	29.4	78.7	lbs/day	0	2.6	4.37	7.00	mg/liter	0	Weekly	Comp.
	PERMIT CONDITION	--	66.0	263			--	--	60			Weekly	Comp.
pH	REPORTED	--	--	--	-	0	6.2	7.4	8.8	Stand. units		Daily	Grab
	PERMIT CONDITION	--	--	--			4.5	--	9.0			Daily	Grab
Total Suspended Solids	REPORTED	.22	111.7	312.4	lbs/day	0	2.7	16.6	27.8	mg/liter	0	Weekly	Comp.
	PERMIT CONDITION	--	394	657			--	--	--			Weekly	Comp.
Oil & Grease	REPORTED	.08	20.8	86.5	lbs/day	0	1.0	3.1	7.7	mg/liter	0	Weekly	Grab
	PERMIT CONDITION	--	223	552			--	--	--			Weekly	Grab
Aluminum & Ammonia	REPORTED	NDA	NDA	NDA		0	NDA	NDA	NDA		0	Weekly	Comp.
	PERMIT CONDITION	--	--	--			--	--	--			Weekly	Comp.
Cyanide, Nickel & Copper	REPORTED	NDA	NDA	NDA		0	NDA	NDA	NDA		0	Weekly	Comp.
	PERMIT CONDITION	--	--	--			--	--	--			Weekly	Comp.
Polychlorinated Biphenyls	REPORTED	<.0012	.054	.204	lbs/day	0	< 1.5	9.0	24	micro-gms/ liter		Weekly	Comp.
	PERMIT CONDITION	--	--	--			--	--	--			Weekly	Comp.

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER		DATE	
Hydrick	Julius	C.	Group Vice President		7	5
LAST	FIRST	MI	TITLE		YEAR	MO
					DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE
OFFICER OR AUTHORIZED AGENT

EX 110

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

INSTRUCTIONS

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
2. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

REPORTING PERIOD: FROM

(17-19)	(20-21)	(22-23)	(24-26)
DIS	7	5	6
SIC	1		
	YEAR	MO	DAY

(26-27)	(28-29)	(30-31)
LATITUDE	7	5
LONGITUDE	8	3
	YEAR	MO
	DAY	1

OUTFALL 002

PARAMETER		(3 card only)					(4 card only)					FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		QUANTITY				UNITS	CONCENTRATION							
		MINIMUM	AVERAGE	MAXIMUM	NO. EX		MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX			
Flow (MGD)	REPORTED	.04	.165	.232		(MGD)	0	--	--	--	--	0	Daily	
	PERMIT CONDITION	--	--	--				--	--	--			--	--
BOD ₅	REPORTED	.33	3.35	8.11		lbs/day	0	1.0	2.45	4.20	mg/liter	0	Weekly	Comp.
	PERMIT CONDITION	--	5.76	11.52				--	--	20.0			Weekly	Comp.
pH	REPORTED	--	--	--		--	0	6.4	7.2	8.3	Stand. units		Daily	Grab
	PERMIT CONDITION	--	--	--				5.1	--	9.0			Daily	Grab
Total Suspended Solids	REPORTED	.20	2.2	5.79		lbs/day	0	.6	1.54	3.0	mg/liter	0	Weekly	Comp.
	PERMIT CONDITION	--	14.63	34.55				--	--	--			Weekly	Comp.
Ammonia	REPORTED	NDA	NDA	NDA		lbs/day	0	NDA	NDA	NDA	mg/liter	0	Weekly	Comp.
	PERMIT CONDITION	--	.115	1.15				--	--	--			Weekly	Comp.
Aluminum	REPORTED	NDA	NDA	NDA		lbs/day	0	NDA	NDA	NDA	mg/liter	0	Weekly	Comp.
	PERMIT CONDITION	--	.115	.576				--	--	--			Weekly	Comp.
Oil & Grease	REPORTED	.16	4.6	15.4		lbs/day	0	.5	3.38	8.0	mg/liter	0	Weekly	Grab
	PERMIT CONDITION	--	69.1	115.2				--	--	--			Weekly	Grab
Polychlorinated Biphenyls	REPORTED	--	.004	.009		lbs/day	0	<1	3.2	5.0	micro-gas/liter		Weekly	Comp.
	PERMIT CONDITION	--	--	--				--	--	--			Weekly	Comp.
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER		DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief, such information is true, complete, and accurate.		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT						
Hydrick Julius C.		Group Vice President		7 5 0 9 2 6										
LAST FIRST MI		TITLE		YEAR MO DAY										

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**


Form Approved
OMB NO. 158-R0073

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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
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7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(2-3) ST	(4-10) 0000141 PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
REPORTING PERIOD: FROM		(20-21) 7 5	(22-23) 6 1	TO	
OUTFALL 003		YEAR	MO	DAY	YEAR

PARAMETER		(3 card only) QUANTITY				UNITS	NO. EX	(4 card only) CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		(36-40) MINIMUM	(40-50) AVERAGE	(50-60) MAXIMUM	(60-63) NO. EX			(63-67) MINIMUM	(67-73) AVERAGE	(73-79) MAXIMUM	(79-82) NO. EX			
Flow (MGD)	REPORTED	.008	.036	.041	MGD	0	--	--	--	--	0	Daily		
	PERMIT CONDITION	--	--	--			--	--	--	--		--	--	
BOD ₅	REPORTED	.036	.51	.95	lbs/day	0	.6	1.7	2.8	mg/liter	0	2/month	Comp.	
	PERMIT CONDITION	--	.709	1.42			--	--	20			2/month	Comp.	
Total Suspended Solids	REPORTED	.012	.84	3.0	lbs/day	0	.2	2.8	8.8	mg/liter	0	2/month	Comp.	
	PERMIT CONDITION	--	2.27	4.26			--	--	--			2/month	Comp.	
Ammonia	REPORTED	NDA	NDA	NDA	lbs/day	0	NDA	NDA	NDA	mg/liter	0	2/month	Comp.	
	PERMIT CONDITION	--	.014	.142			--	--	--			2/month	Comp.	
Aluminum	REPORTED	NDA	NDA	NDA	lbs/day	0	NDA	NDA	NDA	mg/liter	0	2/month	Comp.	
	PERMIT CONDITION	--	.007	.071			--	--	--			2/month	Comp.	
Oil & Grease	REPORTED	.036	.65	1.90	lbs/day	0	.6	2.18	5.6	mg/liter	0	2/month	Comp.	
	PERMIT CONDITION	--	1.56	2.84			--	--	--			2/month	Comp.	
Polychlorinated Biphenyls	REPORTED	--	.0001	.002	lbs/day	0	<1	3.4	7	micro-gms/liter	0	2/month	Comp.	
	PERMIT CONDITION	--	--	--			--	--	--			2/month	Comp.	
pH	REPORTED	--	--	--	--	0	6.6	7.3	7.9	Stand. units	0	Daily	Grab	
	PERMIT CONDITION	--	--	--			5.3	--	9.0			Daily	Grab	

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER			DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Hydrick	Julius	C.	Group Vice President	7	5	0	9		
LAST	FIRST	MI	TITLE	YEAR	MO	DAY			

12

*Covers
Needs Reply* *Ex 12*

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

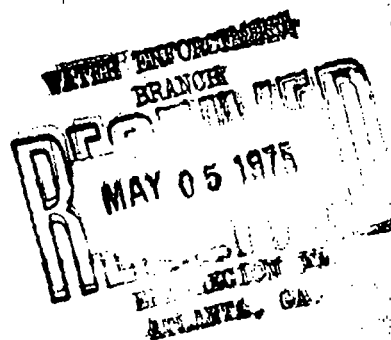
CAPACITOR DIVISION



April 30, 1975

PHONE 803-878-6311
TWX 910-397-2486
TELEX 87-0441

Environmental Protection Agency
Enforcement Division
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309



Attention: Mr. John Lank, State Coordinator SC/NC

RE: NPDES Permit No. SC0000141

Dear Mr. Lank:

The purpose of this letter is to inform you that we will not be in a position to comply with Part III of Permit No. SC0000141 in May of 1975; therefore, a waiver is requested. We would like to continue collecting our water samples manually until such time as the modifications to our treatment facility are complete.

A contractor has been selected and the contract is presently being prepared and will be offered by May 9, 1975. The need for the continuous monitoring station has been discussed with the contractor and will receive first priority when work begins. If at all possible, an attempt will be made to have this monitoring station in operation within 60 days. The completion of this station will satisfy Part III as far as discharge No. 001 is concerned. Since discharge numbers 002 and 003 are being rerouted to the treatment facility and discharge No. 001, it will necessitate manual sampling of these discharges until completion of the work. It is possible that manual sampling of

Mr. John Lank

- 2 -

April 30, 1975

these discharges will continue into November 1975.

If you should have any questions or should need more information,
please advise.

Truly yours,

SANGAMO ELECTRIC COMPANY



Jessie L. Butner
Mfg. Services Manager

JLB/lwp

CC: R. Cochran - Sangamo Electric
R. Powell - Davis & Floyd
C. Jeter - SCDHEC

13

Ex 13
duke

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



PHONE: 803-878-6311
TWX: 810-397-2496
TELEX: 57-0441

August 6, 1975
WATER ENFORCEMENT
BRANCH
AUG 11 1975
EPA-REGION IV
ATLANTA, GA.

Mr. John Lank
U. S. Environmental Protection Agency
Region IV
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Re: Sangamo Electric Company
Pickens, South Carolina
NPDES Permit No. SC 0000141

Dear Mr. Lank:

Please note that in the Engineering Report and detailed plans for modifications to the Wastewater Treatment Facilities at the above referenced location, it was outlined that discharges No. 002 and 003 were to be rerouted into the Wastewater Treatment Facility. Thus, there will be only one discharge point (that designated as Discharge No. 001). This change is presently being made and should be completed by August 13, 1975.

As a result of this change, there will be an increase in the flow rate to the treatment facility and through discharge point 001. Thus we are requesting that the NPDES Permit be modified to reflect these changes. We suggest the following limits for Discharge No. 001:

- For Period Ending December 31, 1975 -

	<u>Daily Avg.</u>	<u>Daily Max.</u>
BOD ₅	72.47 lb./day	275.94 lb./day
Total Suspended Solids	410.9	695.81
Ammonia	1.44	14.4
Aluminum	2.48	13.75
Oil & Grease	293.66	670.04

Mr. John Lank

- 2 -

August 6, 1975

- For Period Beginning January 1, 1976 -

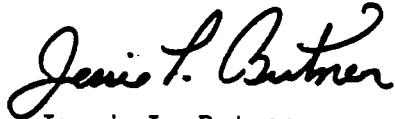
	<u>Daily Avg.</u>	<u>Daily Max.</u>
BOD ₅	72.47 lb./day	275.94 lb./day
TSS	410.9	695.81
Ammonia	1.44	14.4
Aluminum	2.48	5.77
Oil & Grease	143.94	216.4

These values were obtained by summing the values for discharges No. 001, 002, and 003 given in the existing permit. We feel that this is a reasonable approach to permitting the discharge.

If you should have any questions or would like more information, please advise.

Truly yours,

SANGAMO ELECTRIC COMPANY



Jessie L. Butner
Mgr. Manufacturing Services

JLB/lwp

CC: Mr. R. Cochran - Sangamo Electric
Mr. R. Powell - Davis & Floyd
Mr. C. Jeter - SCDHEC

14

SAEW:MD
ENFORCEMENT DIVISION

22 AUG 1975

Mr. Jessie L. Butner
Manager, Manufacturing Services
Sangamo Electric Company
Post Office Box 128
Pickens, South Carolina 29671

Re: NPDES Permit No. SC0000141

Dear Mr. Butner:

I have received your letter of August 6 referencing the consolidation of your three outfalls. The procedure of summing the effluent limitations is the method we commonly use in this type of situation, and I notice that you have already calculated the limits using this technique. You may in the future list these totals in the "permit condition" block of your monitoring reports, and list the discharge serial number as 001.

If you have any further questions, please feel free to contact us.

Sincerely yours,

John C. Lusk, Jr., P.E.
Chief, SC/NC Compliance Group
Water Enforcement Branch

MDonahoe:vs:rm 307:3971:8/20/75

15

NPDES VIOLATION REPORT

Maj. ☒; Min. ☐; Ind. ☒; Mun. ☐; Fed. ☐Date(s) of violation(s) 9/1 - 11/30/75Name of Permittee Sangamo Elec -NPDES No. SC 0000141City Pickens State SC Zip 29661

Type of Violation:

- | | |
|---|---|
| 1. Failure to Report: | 2. Schedule noncompliance |
| a. Implementation Schedule <input type="checkbox"/> | 3. Effluent limits, interim <input checked="" type="checkbox"/> |
| b. Self-monitoring data <input type="checkbox"/> | 4. Effluent limits, final <input type="checkbox"/> |
| c. Noncompliance <input type="checkbox"/> | 5. Other <input type="checkbox"/> |

Source of Data:

- | | |
|--|---|
| 1. Noncompliance report <input type="checkbox"/> | 4. S&A Survey <input type="checkbox"/> |
| 2. Schedule report <input type="checkbox"/> | 5. State Survey <input type="checkbox"/> |
| 3. Self-monitoring <input checked="" type="checkbox"/> | 6. Citizens report <input type="checkbox"/> |
| | 7. Other <input type="checkbox"/> |

Extent of Violation

Condition	Required	Actual	%Variation	%Analytical Error	
<u>pH max</u>	<u>9.0</u>	<u>9.4</u>	<u>+0.4</u>	<u>±0.5</u>	<u>124</u>
<u>TSS max</u>	<u>6.0 mg/l</u>	<u>15.0</u>	<u>150%</u>	<u>+50</u>	<u>-</u>
<u>Aluminum max</u>	<u>13.75 #/l</u>	<u>23.76</u>	<u>100%</u>	<u>+30</u>	<u>124</u>
<u>" max mg/l</u>	<u>1.5</u>	<u>1.8</u>	<u>20%</u>	<u>+30</u>	<u>124</u>

Was State Agency consulted? Yes ☐ No ☒ Comments: Previous violations yes What BOD + Aluminum Date 9/24 - 11/25Was investigation made? Yes ☐ No ☒ Who 1 Date Additional Information: Telecon ; Info Letter ; 308 Letter Recommended Disposition: No Action ☐; Telecon ☐; NOV ☒; A.O. ☐;
Show Cause ☐; Civil Referral ☐; Crim. Referral ☐

Rationale:

Reviewer Connie C State Group Chief Art Legal Approved Disposition: No Action ☐; Telecon ☐; Info Letter ☐; 308 Letter ☐;
NOV ☐; A.O. ☐; Show Cause ☐; Civil Referral ☐;
Crim. Referral ☐

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

Sangamo Elec. - Pickens

INSTRUCTIONS

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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(12-31) ST	(4-16) 0000141 PERMIT NUMBER	(17-19) DIS	(17-19) SIC	(20-21) 7/5	(22-23) 9	(24-26) 1	TO	(26-27) 7/5	(28-29) 1/1	(30-31) 3/0
				LATITUDE		LONGITUDE				

OUTFALL 001

PARAMETER		(3 card only) QUANTITY				UNITS	NO. EX	(4 card only) CONCENTRATION				UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	MINIMUM			AVERAGE	MAXIMUM						
Flow (MGD)	REPORTED	.036	.9	1.7	MGD	0	--	--	--	--	0	Daily	--		
	PERMIT CONDITION	--	--	--		--	--	--							
BOD ₅	REPORTED	14.4	48.2	179.5	lbs./day	0	1.8	5.6	13.6	mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	72.47	275.94		--	--	--							
P. H.	REPORTED	--	--	--	--	0	6.3	7.8	9.4	stand. units	1	Daily	Grab		
	PERMIT CONDITION	--	--	--		--	4.5	--	9.0		Daily	Grab			
Total Suspended Solids	REPORTED	24.2	94.1	183.4	lbs./day	0	6.0	10.3	15.0	mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	410.9	695.81		--	--	--	6.0		Weekly	Comp.			
Oil & Grease	REPORTED	28.6	100.6	291	lbs./day	0	2.5	30.7	41.9	mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	293.66	670.04		--	--	--	--		Weekly	Comp.			
Aluminum	REPORTED	NDA	*1.83	23.76	lbs./day	1	NDA	NDA	1.8	mg/liter	1	Weekly	Comp.		
	PERMIT CONDITION	--	2.48	13.75		--	--	--	1.5		Weekly	Comp.			
Copper	REPORTED	NDA	.018	.57	lbs./day	0	0	.0013	.050	mg/liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	.131	.657		--	--	--	1.5		Weekly	Comp.			
Polychlorinated Biphenyls	REPORTED	2.16	3.40	4.76	lbs./day	0	26	30.6	35	micro-gram/liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	--	--		--	--	--	--		Weekly	Comp.			
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER			DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.				SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT				
Hydrick Jules C.		Group Vice President			7/5 1/2 2/3										
LAST FIRST MI		TITLE			YEAR MO DAY										

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
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(12-31) ST	(14-16) 0000141 PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
---------------	-------------------------------------	----------------	-----	----------	-----------

REPORTING PERIOD: FROM

(20-21) 7	(22-23) 5	(24-25) 9	(26-27) 1
YEAR	MO	DAY	

TO

(28-29) 7	(30-31) 5	(32-33) 1	(34-35) 1	(36-37) 3	(38-39) 0
YEAR	MO	DAY			

OUTFALL 001

PARAMETER		(3 card only) QUANTITY (38-45)				UNITS	NO. EX	(4 card only) CONCENTRATION (46-53)				UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM				MINIMUM	AVERAGE	MAXIMUM					
Cyanide	REPORTED	NDA	NDA	NDA		lbs./	0	NDA	--	NDA		mg/	0	Weekly	Comp.
	PERMIT CONDITION	--	.657	6.57		day		--	--	.1		liter		Weekly	Comp.
Ammonia	REPORTED	NDA	NDA	NDA		lbs./	0	NDA	NDA	NDA		mg/	0	Weekly	Comp.
	PERMIT CONDITION	--	1.44	14.4		day		--	--	--		liter		Weekly	Comp.
Nickel	REPORTED	NDA	NDA	NDA		lbs./	0	NDA	NDA	NDA		mg/	0	Weekly	Comp.
	PERMIT CONDITION	--	.526	6.57		day		--	--	1.5		liter		Weekly	Comp.
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER			DATE			I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Hydrick	Jules	G.	Group Vice President			7	5	1		
LAST	FIRST	MI	TITLE			YEAR	MO	DAY		

Ex 156

Sonyam Elec

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

For Approved
OMB NO. 158-R0073

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4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "3/7" is equivalent to 3 analyses performed every 7 days). If continuous enter "CONT."
5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(2-3) ST	(4-16) 0000141 PERMIT NUMBER	(17-19) DIS	(20-21) SIC	(22-23) LATITUDE	(24-25) LONGITUDE
-------------	------------------------------------	----------------	----------------	---------------------	----------------------

OUTFALL 001

REPORTING PERIOD: FROM

(20-21) 7 YEAR	(22-23) 5 MO	(24-25) 1 DAY	TO	(26-27) 7 YEAR	(28-29) 6 MO	(30-31) 2 DAY
----------------------	--------------------	---------------------	----	----------------------	--------------------	---------------------

PARAMETER		(3 card only) QUANTITY (35-45)				UNITS	NO. EX	(4 card only) CONCENTRATION (46-53)				UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	MINIMUM			AVERAGE	MAXIMUM						
Flow (MGD)	REPORTED	.2604	.7875	1.2298	MGD	0	--	--	--	--	0	Daily	--		
	PERMIT CONDITION	--	--	--			--	--	--			--	--		
BOD 5	REPORTED	28.6	42.8	68.1	lbs./	0	3.4	5.8	8.0	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	72.47	275.94	day		--	--	60	liter		--	--		
PH	REPORTED	--	--	--	--	0	6.3	7.3	8.5	Stand.	0	Daily	Grab		
	PERMIT CONDITION	--	--	--			6.0	--	9.0	Units		--	--		
Total Suspended Solids	REPORTED	40.1	70.1	109.7	lbs./	0	5.7	9.3	16.4	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	410.9	695.81	day		--	--	--	liter		--	--		
Oil & Grease	REPORTED	13.1	60.2	134.0	lbs./	0	3.1	7.9	17.5	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	143.94	216.4	day		--	--	--	liter		--	--		
Aluminum	REPORTED	NDA	NDA	NDA	lbs./	0	NDA	NDA	NDA	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	2.48	5.77	day		--	--	1.5	liter		--	--		
Copper	REPORTED	NDA	NDA	NDA	lbs./	0	NDA	NDA	NDA	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	.131	.656	day		--	--	1.5	liter		--	--		
Polychlorinated Bi Phenyls	REPORTED	.014	.035	.105	lbs./	0	< 2	5.0	14.0	Micrograms/liter	0	Weekly	Comp.		
	PERMIT CONDITION	--	--	--	day		--	--	--			--	--		
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER			DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.								
Hydrick Jules C.		Group Vice President			7/6/03										
LAST FIRST MI		TITLE			YEAR MO DAY		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT								

Ex 156b

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

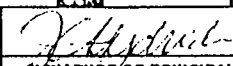
INSTRUCTIONS

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
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7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(2-3) ST	(4-16) 0000141 PERMIT NUMBER	(17-19) DIS	SIC	(20-21) 7/5	(22-23) 1/2	(24-26) 1/1	(28-27) 7/6	(28-28) 2	(30-31) 2/9
			LATITUDE		LONGITUDE				

OUTFALL 001
REPORTING PERIOD: FROM

PARAMETER		(3 card only) QUANTITY (38-49)				UNITS	(62-65) NO. EX	(4 card only) CONCENTRATION (48-59)				UNITS	(62-65) NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM (48-53)	AVERAGE (54-58)	MAXIMUM (59-61)				MINIMUM (48-53)	AVERAGE (54-58)	MAXIMUM (59-61)					
Cyanide	REPORTED	NDA	NDA	NDA	lbs./	0	NDA	NDA	NDA	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	.657	1.314	day		--	--	.1	liter	--	--	--		
Ammonia	REPORTED	NDA	NDA	NDA	lbs./	0	NDA	NDA	NDA	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	1.44	14.4	day		--	--	--	liter	--	--	--		
Nickel	REPORTED	NDA	NDA	NDA	lbs./	0	NDA	NDA	NDA	Mg./	0	Weekly	Comp.		
	PERMIT CONDITION	--	.526	6.57	day		--	--	1.5	liter	--	--	--		
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														
	REPORTED														
	PERMIT CONDITION														

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER		DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Hydrick	Jules	C.	Group Vice President		7/6	0/3		
LAST	FIRST	MI	TITLE		YEAR	MO		

NPDES VIOLATION REPORT

Ex 15(2)

5-6/76

Maj. ☒; Min. ☐; Ind. ☒; Mun. ☐ Fed. ☐

Date(s) of violation(s)

Name of Permittee Sargamo Electric Co

NPDES No. SC0000141

City Pickens

State SC

Zip 29671

Type of Violation:

1. Failure to Report:

a. Self-monitoring data ☐

b. Noncompliance ☐

c. Other ☐

2. Schedule noncompliance ☐

3. Effluent limits, interim ☐

4. Effluent limits, final ☒

5. Other ☐

Source of Data:

1. Noncompliance report ☐

2. Schedule report ☐

3. Self-monitoring ☒

4. S&A Survey ☐

5. State Survey ☐

6. Citizens report ☐

7. Other ☐

Extent of Violation

Condition

Required

Actual

% Variation

%Analytical Error

PCB'S (avg)

N.D.

(.001 ppm) .057 ppm

" (max)

NO

(.001 ppm) .254 ppm

Was State Agency consulted?

Yes ☐

No ☒

Comments:

Previous violations Yes

What

SAME, PH,

Date

History

Date Preliminary Action:

Telecon ☐

Info Letter ☐

NOV ☐

Recommended Disposition:

No Action ☐

308 Letter ☐

Show Cause ☒

A.O. ☐

Civil Referral ☐

Crim. Referral ☐

Rationale:

Show Cause Hearing, per direction of NW Traina,
Set for 8/26/76 1400 hrs. VOC: J. PATRICK, J. LAMM.

Draft Letter Reviewed - R. Allen, 8/27/76

Approved:

Reviewer

MR. Muter

State Group Chief

Legal

Chief State Section (Mun)

Chief Compliance Section

Chief WEB

Chief LSB

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

INSTRUCTIONS

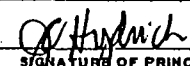
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5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(2-3) ST	(4-16) 0000141 PERMIT NUMBER	(17-19) DIS	(20-21) 7	(22-23) 6	(24-25) 0	(26-27) 3	(28-29) 1	(30-31) 1
		SIC	LATITUDE		LONGITUDE			

OUTFALL 001

REPORTING PERIOD: FROM 7/6/03 TO 7/6/05

PARAMETER		QUANTITY (3 card only)				UNITS	NO. EX	CONCENTRATION (4 card only)				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM (38-40)	AVERAGE (40-53)	MAXIMUM (54-61)				MINIMUM (62-63)	AVERAGE (63-64)	MAXIMUM (64-65)				
Cyanide	REPORTED	NDA	NDA	NDA	Lbs./	0	NDA	NDA	NDA	mg./	0	Weekly	Comp.	
	PERMIT CONDITION		.657	1.314	day		---	---	.10	Liter		--	--	
Ammonia	REPORTED	NDA	NDA	NDA	Lbs./	0	NDA	NDA	NDA	mg./	0	Weekly	Comp.	
	PERMIT CONDITION		1.44	14.4	day		---	---	---	Liter		--	--	
Nickel	REPORTED	NDA	NDA	NDA	Lbs./	0	NDA	NDA	NDA	mg./	0	Weekly	Comp.	
	PERMIT CONDITION		.526	6.57	day		---	---	1.5	Liter		--	--	
	REPORTED													
	PERMIT CONDITION													
	REPORTED													
	PERMIT CONDITION													
	REPORTED													
	PERMIT CONDITION													
	REPORTED													
	PERMIT CONDITION													
	REPORTED													
	PERMIT CONDITION													

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER			DATE			I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Hydrick	Jules	C.	Group Vice President			7/6/05	6/2/2			
LAST	FIRST	MI	TITLE			YEAR	MO	DAY		

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Form Approved
OMB NO. 158-R0073

Sargans Electric
P.O. Box 128
Pickens, S.C. 29671

INSTRUCTIONS

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
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4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(2-3) ST	(4-10) 0000141 PERMIT NUMBER	(17-19) DIS 001	SIC	(20-21) (22-23) (24-25) 7 6 0 3 1 YEAR MO DAY	(26-27) (28-29) (30-31) 7 6 0 5 3 1 YEAR MO DAY
OUTFALL 001		REPORTING PERIOD: FROM		TO	

PARAMETER		(3 card only) QUANTITY (38-45)				NO. EX	(4 card only) CONCENTRATION (46-53)				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	UNITS		MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow (MGD)	REPORTED	.4051	1.0500	1.4587	MGD	0	---	---	---	---	0	Daily	CR
	PERMIT CONDITION	---	---	---			---	---	---			--	--
BOD ₅	REPORTED	5.5	41.17	83.2	Lbs./day	0	.8	4.7	8.0	mg./Liter	0	Weekly	Comp.
	PERMIT CONDITION	---	72.47	275.94			---	---	60			--	--
P.H.	REPORTED	---	---	---	---	0	6.3	7.3	8.4	Stand.	0	Daily	CR
	PERMIT CONDITION	---	---	---			6.0	---	9.0	units		--	--
Total Suspended Solids	REPORTED	23.4	67.4	127.5	Lbs./day	0	3.4	7.7	12.4	mg./Liter	0	Weekly	Comp.
	PERMIT CONDITION	---	410.9	695.81			---	---	---			--	--
Oil & Grease	REPORTED	30.2	108.6	209.3	Lbs./day	0	4.4	12.4	23.0	mg./Liter	0	Weekly	Grab
	PERMIT CONDITION		143.94	216.4			---	---	---			--	--
Aluminum	REPORTED	NDA	NDA	NDA	Lbs./day	0	NDA	NDA	NDA	mg./Liter	0	Weekly	Comp.
	PERMIT CONDITION	---	2.48	5.77			---	---	1.5			--	--
Copper	REPORTED	NDA	NDA	NDA	Lbs./day	0	NDA	NDA	NDA	mg./Liter	0	Weekly	Comp.
	PERMIT CONDITION	---	---	---			---	---	1.5			--	--
Poly Chlorinated Biphenyls	REPORTED	.017	.057	.254	Lbs./day	0	2	3.9	27	PPb	0	Weekly	Comp.
	PERMIT CONDITION	---	---	---			---	---	---			--	--

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER		DATE		I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	<i>[Signature]</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Hydrick	Jules	C.	Group Vice President		7 6 0 6 2 2			
LAST	FIRST	MI	TITLE		YEAR MO DAY			

16

FEB 13 1976

AAEW:CPC

Mr. J. C. Hydrick
Vice President
Sangamo Electric Company
Post Office Box 1347
Springfield, Illinois 62708

Re: Notice of Violation
NPDES Permit No. SC0006141
Pickens, South Carolina

Dear Mr. Hydrick:

This is to notify you that you are in violation of the above-referenced NPDES permit as follows:

You are in violation of the effluent limitations of the permit on pH, total suspended solids, and aluminum for the period September 1, 1975, through November 30, 1975.

Until such time as you achieve compliance with all conditions of your NPDES permit, you are considered to be in violation of and subject to enforcement action pursuant to Section 109 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1319).

If you have specific questions as to the requirements of your permit, please contact Mr. John C. Lank, Chief, NC/SC Compliance Group, or Mrs. Connie Christianson, SC Compliance Group, at (404) 526-3971.

Sincerely yours,

J. B. Patrick, Jr.
Chief
Compliance Section
Water Enforcement Branch
Enforcement Division

cc: Mr. Jessica L. Butner
Sangamo Electric Company

Mr. Charles Jeter
South Carolina Department of Health
and Environmental Control

Handwritten signature
CPCristianson:cmj:rm 307:3971.2/10/76

17



WATER ENFORCEMENT
BRANC

MAR 17 1976
EPA-REGION IV
ATLANTA, GA.

Ex 17
BOARD MEMBERS

Lachlan L. Hyatt, Chairman
William M. Wilson, Vice-Chairman
I. DeQuincey Newman, Secretary
W. A. Barnette, Jr.
Leonard W. Douglas, M.D.
J. Lorin Mason, Jr., M.D.
William C. Moore, Jr., D.M.D.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

E. KENNETH AYCOCK, M.D., M.P.H., COMMISSIONER
J. MARION SIMS BUILDING — 2600 BULL STREET
COLUMBIA, SOUTH CAROLINA 29201

March 16, 1976

Mr. Jim Patrick
Compliance Section
U.S. Environmental Protection Agency
1421 Peachtree St., N.E.
Atlanta, Georgia 30309

Re: Polychlorinated Biphenyls
Sangamo Electric Company
NPDES Permit #SC0000141

Dear Mr. Patrick:

As part of our PCB program in conjunction with EPA, I have reviewed the NPDES permit for Sangamo Electric (SC0000141) which was issued by EPA. There were originally three discharges from this plant, but 002 and 003 have been diverted into 001. The final effluent limitations for 002 and 003 required a "NON-DETECTABLE" limit for PCB's, but there is no limitation for 001. When the discharges were combined, the company requested a permit modification (August 6, 1975) to combine the final limitations for all three discharges. In the apparent absence of a written EPA reply, the company assumed such an addition was satisfactory and now reports the combined limits as the permit condition on the Discharge Monitoring Report. On the DMR they report a discharge of PCB's, but indicate no limitation on their permit.

It would appear that there is some misunderstanding concerning the discharge of PCB's from this facility. I would greatly appreciate any effort you may be able to extend in order to clarify this situation.

If I may be of any assistance, do not hesitate to call (758-5483).

Sincerely,

Robert G. Gross, P.E.
Industrial & Agricultural Wastewater Division
Bureau of Wastewater & Stream Quality Control

RGG:jk

18

05 MAY 1976

4AEN:WMT

Mr. J. C. Hydrick
Vice President
Sangamo Electric Company
Post Office Box 3347
Springfield, Illinois 62703

Re: Sangamo Electric Company
NPDES Permit No. SC0000141

Dear Mr. Hydrick:

Following a review of the above-referenced file by this office, it has been determined that some additional information is needed from you concerning PCB's at the facility. This Agency requests that you develop analytical data on PCB's in the facility's intake water and also locate and identify areas within the facility where PCB's may enter the discharge stream. This report should describe abatement practices implemented in these identified areas to keep PCB's from entering the discharge.

A representative of the company should be prepared to submit this information to this office on June 15, 1976, at 9:30 a.m. This data will be used to determine what modification of the PCB parameter is necessary.

It has been noted that since the discharges have been combined at this facility, the discharge monitoring reports to this Agency indicate no permit limit for PCB's. When the discharge limitations for each parameter are combined, the PCB's non-detectable limit remained applicable.

If you have any questions concerning this matter, please contact Mr. Marvin Tebeau, SC Compliance Group, at (404) 526-3971.

Sincerely yours,

John C. Lank, Jr., P.E.
Chief, NC/SC Compliance Group
Water Enforcement Branch
Enforcement Division

cc: Mr. Charles Jeter
South Carolina Department of Health
and Environmental Control

WMT
WMT:dmj:rm 307:3971:5/4/76

19

SANGAMO ELECTRIC

June 15, 1976

Wayne R. Mathis

EPA, Water Enforcement Branch

Jessie L. Butner

Sangamo Electric Co., Pickens, S.C.

Ralph W. Jennings

EPA, Water Enforcement Branch

Sara Turnipseed

EPA, Attorney

~~ROUTINE~~

RALPH JENNINGS

~~6/3/76~~

PAGE 1/4

MARVIN TEBB

~~6/16/76~~

JOHN LARK

Memo for Record

15 June 1976

Subject: Conference with Sargamo Electric Co. Ref. PCBs, etc.

① Mr. Jessie Botner, Sargamo Electric Co. presented the attached report which describes the incidence of polychlorinated biphenyls (PCBs) in the Sargamo intake water, and describes the source of PCB to the Sargamo effluent as well as the procedures for control of PCBs. The report was in response to Mr. Lark's letter requesting information, dated 5 May 76.

The salient points discussed were as follows:

a. PCB's in the water delivered to Sargamo by the Pickens SC municipal water system are variable, with peaks of up to 16 ppb observed by Sargamo's sampling program over the past year. In some cases, Sargamo has data to show concurrent peaks of the same magnitude, at Sargamo, at Pickens Water Plant sample tap, and at Pickens Water Plant intake. Mr. Botner will furnish a copy of all this data to Mr. Ralph Jennings, this Agency.

b. The Pickens^{SC} water plant presently draws water directly from a reservoir having only minimal exposure to PCB's generated by Sargamo. According to Mr. Botner, the only source of PCBs from Sargamo located within the Pickens reservoir watershed, is the Pickens municipal landfill, where Sargamo discarded PCB (over)

Contaminated wastes during the period May through July 1972. Mr. Butner states that only a very small amt. of contaminated waste was disposed of here by Sargamo.

c. Present sources of PCB's in Sargamo effluent include residual PCB in the plant piping, and the PCB entrained in the sludge in the existing equalization pond, which is part of the industrial waste treatment facility. Note: this is principally aluminum-aluminum oxide - aluminum hydroxide sludge, however PCB concentrations of up to 100 Parts per million have been measured at the 16-18 foot level in the lagoon. All other sources of PCB's here, reportedly, have been isolated; all PCB-contaminated wastes including floor drainage, potential spills, vacuum pump exhausts, etc are collected into drums and disposed of to Rollins Environmental Serv., a commercial scavenger. The lagoon is scheduled to be taken ~~out~~ out of service when a new lagoon is constructed, and the sludge, with entrapped PCB's, will be buried in the old lagoon as the lagoon is filled. This will be ultimate disposal IAW SRS & SC recommendations.

d. Sargamo anticipates that process utilization of PCB's will be replaced with DOP's at some future date.

(cont.)

2. Impression was that Effluent PCB's will continue to decline and should approach the reported limit of detectability (which, due to method of reporting, will be stated as "less than 2 PPB"). This will occur as the piping clears up and the old lagoon is taken out of service.

3. PCB's are also being detected in Town Creek at a monitoring point about 100 yds upstream of the Sanguano outfall, according to Mr. Butler. He will transmit data on this monitoring to Mr. Jennings. The reason for the cyclical peaking of PCB's in the surface waters of SC was not explained by Mr. Butler.

② Discussed Acid Spill (9-10 May 76) at Sanguano Electric. This was due to the accumulation of debris in a manhole in the sewer between the plant and the treatment facility which produced flooding conditions which entered the storm sewer system about 130,000 gal of non-contaminated water overflowed, during this period, and to this flow was added about 1000 gal of mixed nitric and phosphoric acids used as rinse solutions in the foil etching process. These amounts ~~were~~ of discharged acid were reported to be normal for production activities rather than an unusual situation. Normally, this acid would have been neutralized in the treatment facility. The in-plant wastewater (over)

P/A

sewer was modified by installing bar screens at the central collecting sump which will preclude debris from entering the sewer. The situation had not occurred previously, and should not recur again.

③ Past NPDES violations were discussed briefly. These did not seem to be of great consequence, being attributed to (1) lagoon upsets during the time when stormflows were still routed through the IWTIP, (2) laboratory error in analysing oil and grease, and (3) malfunction of a pH controller.

④ Recommend no enforcement action at this time. The data on PCB's in the surface waters of SC and in the Pickens municipal water supply should be followed closely, with the State of SC assuming the lead Agency role. DMR's from Sagrams should also be closely followed for PCB's, with a recommendation for separate reporting of the PCB species at the detectable limit of < 1 ppb rather than of a combined value of < 2 ppb total PCB's if the revised limits produce an apparent violation due to reporting format.

W. H. Allen

20

Finger - Arlington problems

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309FOR IMMEDIATE RELEASETRAINA 526-2211
POU 526-3004

Fish taken from Lake Hartwell and Twelve Mile Creek in Pickens County, South Carolina should not be eaten until further notice, according to a statement issued jointly today by E. Kenneth Aycock, M. D., Commissioner of the South Carolina Department of Health and Environmental Control (DHEC), and Jack E. Ravan, Administrator of the Environmental Protection Agency, EPA, Region IV. Joining in the statement were the U. S. Army Corps of Engineers, Savannah District, and the U. S. Fish and Wildlife Service.

In test results, DHEC discovered levels of polychlorinated Biphenyls (PCB's) in fish taken from the area which may be hazardous to human health. The preliminary tests appear to indicate that the high PCB levels are confined to Twelve Mile Creek area, but as a safety precaution, Dr. Aycock and Mr. Ravan extended the advisory to include fish taken from the whole of Lake Hartwell.

According to Mr. Ravan, PCB's are a group of organic compounds used primarily in the manufacture of electronic capacitors and transformers. PCB's are toxic to aquatic life, persistent in

the environment for long periods of time, and are biologically accumulative.

"There is wide spread evidence that PCB's are presently in the environments throughout the country but their significance as a health hazard is not thoroughly known," said Aycock.

The preliminary DHEC laboratory findings are the result of an ongoing study of PCB's in South Carolina. Findings were confirmed Friday by EPA.

When sources of the contaminants are found, these sources will be eliminated," the agencies said. Potential sources have already been identified in the watershed outside the reservoir in Pickens County, South Carolina and will be investigated jointly by the two agencies next week.

The U. S. Food and Drug Administration has recommended a safety level of five parts per million for fish and shell fish. Studies conducted most recently show PCB levels ranging from 3-15 ppm in fish samples from the area.

Citizens in surrounding areas need not be alarmed about drinking water safety. While there are no official limits for PCB's for drinking water, the Environmental Protection Agency is considering a PCB standard of one part per billion in drinking water supplies.

"Drinking water supplies tested in Pickens County showed that PCB levels do not exceed that level," Aycock said.

Aycock and Mr. Ravan both confirmed that Lake Hartwell waters are safe for all other uses. "Swimming and other water recreation need not be restricted," the statement said.

The DHEC technical staff is working closely with EPA on pinpointing and eliminating the sources of PCB's in the Pickens County area. Monitoring wells are also being installed to check on any possible ground water contamination. DHEC and EPA will monitor the other areas of South Carolina where potential PCB concentrations may exist.

PCB's were found to exist in very small concentrations one year ago during a routine pesticide analysis of drinking water supplies in Pickens County. The DHEC Bureau of Epidemiology then conducted a study of death rates in the area to determine if there was an unusually high rate of cancer of the liver, cancer of the gall bladder and other related diseases suspected to be caused by very high concentrations by PCB's. There were no statistically significant instances of deaths from these diseases.

"The trace amounts of PCB's found in drinking water supplies in Pickens County are not of significant magnitude to cause alarm," says Aycock. "We are continuing to research the data and will take appropriate action if a potential health hazard exists. The DHEC and EPA technical staff will continue to monitor water supplies in the area."

Mr. Ravan stated that the EPA is working with DHEC, Army Corps of Engineers, the Georgia Environmental Protection Division, the Fish and Wildlife Agencies of South Carolina and Georgia, and the U. S. Fish and Wildlife Service to determine the full extent of PCB presence in water and fish in the Hartwell Reservoir area.

21

JAEW:WRM

August 23, 1976

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Jules Hydrick, Vice President
Sangamo Electric Company
P. O. Box 118
Pickens, South Carolina 29671

Re: Notice to Show Cause
NPDES Permit No. SC0000141
Pickens, SC

Dear Mr. Hydrick:

It has come to our attention that Sangamo Electric Company is in violation of the above-referenced permit. Specifically, discharges of polychlorinated biphenyls (PCB's) in excess of permit limitations continue to occur. Such violation of an NPDES permit is subject to enforcement action pursuant to Section 309 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1319). This Section provides for the issuance of compliance orders and/or the initiation of civil or criminal actions.

The Agency requests that representatives of Sangamo Electric Company be present in this office on Thursday, August 26, 1976, at 2:00 PM to show cause why the Agency should not refer the matter to the U.S. Attorney for initiation of civil or criminal proceedings. The representatives should be prepared to provide all relevant information, with documentation, pertaining to the violation.

Sincerely yours,

Paul J. Traina
Director
Enforcement Division

cc: Mr. Charles Jeter, South Carolina Department of
Health & Environmental Control

bc: Traina, Harlow
S&A, Athens
Water Programs, SC Section

KNATHIS:fg 3971:8/24/76: Pa 307

CHX

LHM

AUG 30 1976

Dr. E. Kenneth Aycock, Commissioner
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

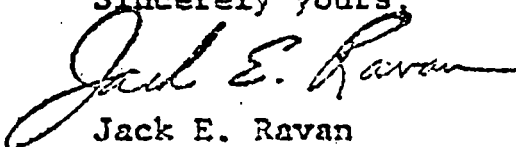
Re: Sangamo Electric Company
Administrative Order No. AO 76-111(w)

Dear Dr. Aycock:

Pursuant to Section 309(a)(3) and (4) of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1319(a)(3) and (4), the Regional Administrator, Region IV, United States Environmental Protection Agency, has determined that the above referenced company is in violation of its NPDES permit. As a result, the Regional Administrator has issued an Administrative Order against the company.

The original Order is presently being served. Enclosed is a courtesy copy for your reference.

Sincerely yours,



Jack E. Ravan
Regional Administrator

Enclosures (2)

cc: John Jenkins

4AEL:RTA

AUG 30 1976

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Jules C. Hydrick
Group Vice President
Sangamo Electric Company
Post Office Box 128
Pickens, South Carolina 29671

Re: Administrative Order No. AO 76-111(2)

Dear Mr. Hydrick:

Pursuant to Section 309(a)(3) and (4) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1319(a)(3) and (4)) (hereinafter, the "Act"), the Regional Administrator, Region IV, United States Environmental Protection Agency, has determined that Sangamo Electric Company is in violation of its NPDES permit. As a result, the Regional Administrator has issued an Administrative Order which is enclosed.

Any person who violates an Order issued by the Administrator shall be subject to a civil penalty not to exceed \$10,000 per day of such violation. (Section 309(d) of the Act) (33 U.S.C. 1319(d)).

If you have any questions concerning the enclosed Order, please contact Mr. Ronald T. Allan, Attorney, Legal Support Branch, Enforcement Division, at 404/526-3506.

Sincerely yours,

Original Signed By

Paul J. Traina
Director
Enforcement Division

Enclosures (2)

cc: Lewis T. Smoak, Esquire
John E. Jenkins
David Heriot

bc: John Lank, Jim Finger, Ray Dozart, Headquarters
RTAllen:mee:rm 304:3506:8/30/76

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV

IN THE MATTER OF)	DOCKET NO. 76-111(w)
)	NOTICE OF VIOLATION
SANGAMO ELECTRIC COMPANY)	AND
CAPACITOR DIVISION)	ORDER
)	(33 U.S.C. 1319(a))

Pursuant to the above-referenced statutory authority which has been delegated to me by the Administrator, I hereby make the following findings of fact:

FINDINGS OF FACT.

1. Sangamo Electric Company, Capacitor Division (hereinafter, the "Company"), operates a facility in Pickens, South Carolina, which discharges pollutants into Town Creek, a water of the United States.

2. Said facility has been issued and is subject to the provisions of National Pollutant Discharge Elimination System (NPDES) Permit Number SC0000141.

3. Part I, Section A of the subject permit sets out effluent limitations which are to be met by the said facility. Specifically, the Company is authorized to discharge the following parameters, among others, in the amounts indicated:

<u>Serial No.</u>	<u>Parameter</u>	<u>Discharge Limitations</u>	
		<u>Daily Avg.</u>	<u>Daily Max.</u>
001	Polychlorinated Biphenyls	-	-
002	Polychlorinated Biphenyls	Non-detectable	
003	Polychlorinated Biphenyls	Non-detectable	

4. The Company has submitted to Region IV, United States Environmental Protection Agency, the following results from the Company's discharge monitoring reports:

<u>Date</u>	<u>Parameter</u>	<u>Actual Results</u>		
		<u>Min.</u>	<u>Avg.</u>	<u>Max.</u>
3/1/76 - 5/31/76	PCB	2 ppb	3.9 ppb	27 ppb

5. The United States Environmental Protection Agency has adopted the position that the limit of detection for Polychlorinated Biphenyls using the approved analytical method is one part per billion (ppb).

6. The discharge of Polychlorinated Biphenyls in amounts ranging from 2 ppb to 27 ppb constitutes a violation of the NPDES permit condition which imposes a non-detectable limit on Polychlorinated Biphenyls.

7. Representatives of the Environmental Protection Agency have met with representatives of the Company and the State of South Carolina to discuss the violations of the NPDES permit. These meetings were held on June 15, August 16, August 23 and August 26, 1976.

8. As a result of the above-referenced meetings, the Company has modified its procedures for storage of PCB contaminated waste to preclude such waste from being discharged to waters of the United States. In addition, the Company has initiated plans to construct a lagoon to replace an existing lagoon containing PCB contaminated sludge.

VIOLATIONS

9. Sangamo Electric Company has violated the terms and conditions of NPDES Permit Number SC0000141 in that the Company has exceeded the effluent limitations on Polychlorinated Biphenyls during the period of March 1, 1976, through May 31, 1976.

ORDER

Based upon the foregoing findings of fact and violations and pursuant to the provisions of Section 309(a)(3), (4) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1319(a)(3), (4)), it is hereby ordered:

1. That within twenty-four hours of receipt of this Order, Sangamo Electric Company shall cease discharging from the first lagoon of their wastewater treatment system.

2. That within thirty (30) days of receipt of this Order, Sangamo Electric Company shall be in compliance with all terms and

conditions of NPDES Permit Number SC0000141, including, but not limited to, the effluent limit on Polychlorinated Biphenyls. The daily average and daily maximum limitation on Polychlorinated Biphenyls is non-detectable. For purposes of this Order, the non-detectable limit for Polychlorinated Biphenyls is one part per billion (1 ppb).

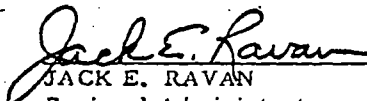
3. That upon receipt of this Order, Sangamo Electric Company shall begin monitoring on a daily basis the Polychlorinated Biphenyls being discharged through discharge point 001. In addition, the Company shall begin monitoring on a basis of three (3) times per week the Polychlorinated Biphenyls in the wastewater being discharged from the plant prior to it entering the wastewater treatment facility. The monitoring results shall be sent on a weekly basis, beginning September 13, 1976, to the United States Environmental Protection Agency, Region IV, and to the State of South Carolina. The increased monitoring shall continue until the Company receives a statement, in writing, from the Environmental Protection Agency, Region IV, that it may be discontinued.

4. That all information required to be submitted by this Order be sent by registered mail or its equivalent to the following addresses:

Director, Enforcement Division
United States Environmental Protection Agency
1421 Peachtree Street, NE
Atlanta, Georgia 30309

Deputy Commissioner
Environmental Quality Control
Department of Health & Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Date AUG 30 1976


JACK E. RAVAN
Regional Administrator

(Pertinent provisions of the Federal Water Pollution Control Act, as amended, are attached.)

23

THOMPSON, OGLETREE AND DEAKINS
LAW OFFICES

FIRST NATIONAL BANK TOWER
ATLANTA, GEORGIA 30303
(404) 658-9300
CABLE TOLLAW

THE DANIEL BUILDING
GREENVILLE, SOUTH CAROLINA 29602
(803) 242-3200

INVESTMENT BUILDING
1511 K STREET, N. W.
WASHINGTON, D. C. 20005
(202) 783-1900

September 22, 1976

Jack E. Ravan, Esquire
Regional Administrator
U. S. Environmental Protection Agency
Region IV
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

Re: Sangamo Electric Company
Administrative Order No. AO-76-111W

Dear Mr. Ravan:

Our client, Sangamo Electric Company, Capacitor Division, received this Administrative Order on September 2, 1976. As was clearly stated to Paul J. Traina, Director of Environmental Protection Agency's Enforcement Division, during our Show Cause meeting on Thursday, August 26, 1976, the Company takes exception to the Agency's findings of fact which conclude that the Company has violated the conditions of its National Pollutant Discharge Elimination System Permit. It is the Company's clearly stated intention to exercise all reasonable means to achieve the elimination of the discharge of PCB's into the receiving stream within the 30 days as directed in your Order. This well-intentioned action on the Company's part should not however be construed as any admission or acquiescence by the Company in the Agency's findings of fact with relation to the alleged PCB conditions in the permit, or to the finding that our client has violated those PCB conditions. Likewise, our concentrated actions to achieve 1 ppb in our discharge within 30 days should not be construed as acceptance by the Company of the legality of the Order.

Several points need to be clarified for the record: (1) Discharge 001, as shown in your Findings of Fact, has never contained a limitation

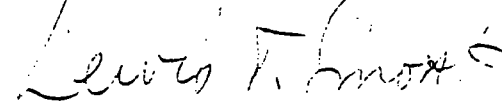
Jack E. Ravan, Esquire
Page Two

on PCB's; (2) Quarterly monitoring reports have been submitted to your Agency covering the period beginning December 1974 detailing the Company's weekly average and maximum discharge of polychlorinated biphenyls; (3) A Notice of Violation of permit conditions from your Agency dated February 18, 1976 made no mention of PCB violations; (4) During the three months immediately preceding the EPA ordered bypass the Company's discharge of PCB's was approaching an average of between two and three parts per billion; (5) Recent substantial increases in PCB discharges from the waste treatment plant can be attributed directly to the EPA ordered bypass of the upper lagoon; and (6) Continued results indicate that EPA's test data are consistently 100% higher than the results being separately produced by two independent laboratories.

While we are herein stating our disagreement and protest of the Administrative Order, let me assure you that our client will continue to take every reasonable effort to eliminate that small amount of PCB's which are apparently still escaping from our treatment plant into the receiving stream.

Very truly yours, ,

THOMPSON, OGLETREE AND DEAKINS



Lewis T. Smoak

LTS:rp

24

SUMMONS IN A CIVIL ACTION

CIV. 1a (2-64)
(Formerly D. C. Form No. 48a Rev. (6-65))

United States District Court

FOR THE

DISTRICT OF SOUTH CAROLINA
ANDERSON DIVISION

OCT 1 1976

CIVIL ACTION FILE NO. 76-1838

SANGAMO WESTON, INCORPORATED,

Plaintiff

v.

RUSSELL E. TRAIN, As Administrator,
Environmental Protection Agency;
JACK E. RAVAN, As Region IV Administrator,
Environmental Protection Agency;
PAUL J. TRAINA, As Director, Enforcement
Division, Environmental Protection Agency,
Region IV,

Defendants.

ORIGINAL FILED

OCT - 1 1976

F. C. FOSTER JR

SUMMONS

To the above named Defendant :

You are hereby summoned and required to serve upon **Lewis T. Smoak and
L. Gray Geddies, Jr., of Thompson, Ogletree & Deakins**plaintiff's attorney, whose address is **2222 The Daniel Building, Greenville, S.C.,
29602**an answer to the complaint which is herewith served upon you, within-20- days after service of this
summons upon you, exclusive of the day of service. If you fail to do so, judgment by default will be
taken against you for the relief demanded in the complaint.MILLER C. FOSTER, JR.

Clerk of Court.

James W. Thomas

Deputy Clerk.

Date: **October 1, 1976.**

[Seal of Court]

NOTE:—This summons is issued pursuant to Rule 4 of the Federal Rules of Civil Procedure.

RECEIVED
EPA/REGION IV
OCT 14 10 57 AM '76
ENFORCEMENT
DIVISION

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
ANDERSON DIVISION

ORIGINAL FILED

SANGAMO WESTON, INCORPORATED

OCT - 1 1976

Plaintiff,

MILLER C. FOSTER JR., CLERK

v.

RUSSELL E. TRAIN, As Administrator,
Environmental Protection Agency; JACK
E. RAVAN, As Region IV Administrator,
Environmental Protection Agency; PAUL
J. TRAINA, As Director, Enforcement
Division, Environmental Protection Agency,
Region IV,

C.A. DOCKET NO. 76-1833

Defendants.

COMPLAINT

1. Plaintiff Sangamo Weston, Inc. is a corporation organized and existing under the laws of the State of Delaware. Plaintiff owns and operates Sangamo Electric Company located near Town Creek, a tributary of Twelve Mile Creek in Pickens County, South Carolina.

2. Defendant Russell E. Train is the Administrator of the United States Environmental Protection Agency (EPA) with offices at 401 M Street, S.W., Washington, D. C. 20560. The Administrator is charged generally with the administration of the Federal Water Pollution Control Act as amended. More specifically, he is authorized to issue and administer National Pollutant Discharge Elimination System permits for the discharge of pollutants from industrial plants (NPDES permits). The authority to issue and administer NPDES permits has been subdelegated to the various EPA Regional Administrators across the nation.

3. Defendant Jack E. Ravan is employed by EPA as the Regional Administrator of EPA Region IV, located at 1421 Peachtree Street, N. E., Atlanta, Georgia 30309. Defendant Paul J. Traina is employed by EPA as the

Director of the Enforcement Division, EPA Region IV, with offices at the same address. EPA Region IV has direct supervision and control over all NPDES permits issued in South Carolina.

4. This Court has jurisdiction under the provisions of 28 U.S.C. §§1331, 1337 and 1361; under the Declaratory Judgment Act, 28 U.S.C. §2201-2202; and under §10 of the Administrative Procedure Act, 5 U.S.C. §§701 et seq. The amount in controversy exceeds \$10,000 exclusive of interests and costs.

5. Pursuant to the subdelegation of authority described in paragraph 2, the Regional Administrator, on September 19, 1974, issued NPDES Permit Number SC 0000141 to the Plaintiff's Pickens County Plant.

6. In its application for the above referenced NPDES Permit, Plaintiff informed EPA that a compound known as Polychlorinated Biphenyls (PCBs) was present in its effluent. Though PCB limitations were not included in the draft NPDES Permit, PCB limitations were contained in the final permit known as NPDES Permit SC 0000141.

7. When the above referenced permit was issued, Plaintiff had three separate discharges at its facility which EPA designated as Serial 001, Serial 002, and Serial 003. The PCB limitations contained in the permit were:

Serial 001 no numerical limit

Serial 002 non-detectable limit

Serial 003 non-detectable limit

The NPDES Permit required Plaintiff to sample the discharge of PCBs from the plant by means of a 24-hour composite sample taken once per week for Serials 001 and 002 and twice monthly for Serial 003. These samples have been taken as required by the permit and the results have been reported to EPA and the South Carolina Department of Health and Environmental Control on a quarterly (3 month) basis since December 1974.

8. During 1975, Plaintiff decided to combine the effluent discharges from Serial 002 and 003 into the existing Serial 001 discharge. In accordance with established EPA procedures, the effluent limitations for Serial 002 and Serial 003 were added to the limits for Serial 001 to determine the proper limits for the

combined discharges. These additions resulted in some changes and on August 6, 1975, Plaintiff requested a modification of the NPDES permit to reflect these changes. The limitation on PCBs for Serial 001 was not changed and no modification of the parameter was requested. The modifications requested by Plaintiff were approved by Defendants on August 22, 1975.

9. The PCB limitation for Serial 001 has not been changed or modified since the NPDES permit for the facility was first issued on September 19, 1974.

10. Plaintiff is not now, nor has it ever been, in violation of the PCB limitations contained in NPDES permit Number SC 0000141.

11. On August 30, 1976, the Regional Administrator issued a Notice of Violation and Order [a copy is attached hereto as Exhibit A] which purports to find Plaintiff in violation of the PCB limitations in the permit from March 1 through May 31, 1976. This Administrative Order by EPA is arbitrary and capricious, is totally unsupported by the evidence, and constitutes an abuse of discretion on the part of EPA.

12. The Administrative Order required Plaintiff to stop all discharges from the first lagoon in its waste treatment facility. EPA ordered Plaintiff to bypass this first lagoon and discharge all plant wastewater directly into the second, or lower lagoon. EPA ordered this bypass procedure even though it was objected to on environmental grounds by Plaintiff, by Plaintiff's consulting engineers, and by representatives of the South Carolina Department of Health and Environmental Control. This arbitrary and capricious Order by Defendants resulted almost immediately in the quantity of PCBs being discharged from Plaintiff's facility to triple in amount.

13. The Administrative Order requires Plaintiff to comply with a daily average and maximum limitation on PCBs of less than one part per billion. This limit is not contained in Plaintiff's existing permit and is far more stringent than the EPA proposed national effluent standard for PCBs. The proposed national standard would require that PCBs not exceed 1 part per billion daily average when measured over a monthly period and not exceed 5 parts per billion

measured as a daily maximum. The effluent limitations contained in the Administrative Order are arbitrary, capricious and totally without support. As such, their inclusion in the Administrative Order constitutes an abuse of discretion by EPA.

14. Unless the arbitrary and capricious EPA Administrative Order is set aside by this Court, Plaintiff will be subject to enforcement actions not only by EPA but by other private individuals under the provisions of the Federal Water Pollution Control Act. These actions could result in civil fines of \$10,000 per day, criminal penalties, and/or the closing of Plaintiff's Pickens County Plant.

15. In its relations with Plaintiff throughout this entire matter, Defendants have disregarded their own administrative procedures, have failed to conform with the requirements of due process of law, and have otherwise abused their discretion by acting in an arbitrary and capricious manner.

WHEREFORE, Plaintiff prays:

1. That judgment be entered declaring the Administrative Order issued by EPA as arbitrary, capricious, an abuse of discretion and otherwise not in accordance with law.

2. That judgment be entered enjoining Defendants from instituting any enforcement proceedings against Plaintiff.

3. That judgment be entered restraining Defendants from instituting any enforcement action against Plaintiff pending a full hearing on the merits of this case.

4. That Plaintiff have such other and further relief as this Court may deem just and proper.

Respectfully submitted,

THOMPSON, OGLETREE & DEAKINS

2222 The Daniel Building
Greenville, South Carolina 29602

By: Lewis T. Smoak
Lewis T. Smoak

By: L. Gray Geddie, Jr.
L. Gray Geddie, Jr.

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AGREEMENT

A meeting was held in Atlanta on October 13, 1976, between Sangamo, State of South Carolina, and EPA to discuss results of effluent and influent sampling and analyses thereof. The parties agreed that the data indicate that PCB levels from the manufacturing process are decreasing significantly. Further, results of studies of various Federal, State, and private labs are becoming closer with regard to data comparability. EPA and the State recognize good faith efforts on the part of Sangamo to control discharge of PCB's. However, it is recognized that there needs to be a clarification of permit conditions which will require a modification. Therefore, effective midnight, October 15, 1976, effluent limitations with regard to PCB's in NPDES permit SC 0000141 are as follows:

	<u>30 Day Avg</u>	<u>Daily Max.</u>
From Oct 15, 1976 to March 31, 1977	1/4 oz.	1 oz.
From April 1, 1977 to Oct 31, 1977	1/6 oz.	2/3 oz.
After Nov 1, 1977	No PCB use and no net increase of PCB's above levels of influent raw water concentration.	

Further, the parties agree that Sangamo will withdraw its lawsuit against EPA without prejudice. This agreement shall not constitute an admission by Sangamo as to the validity of any alleged violations of the permit conditions or Administrative Order 76-111W existing prior to October 15, 1976. Nor shall this agreement affect the exercise of EPA's prosecutorial discretion for alleged violations prior to October 15, 1976. Further, parties agree that the State of South Carolina and EPA will proceed to public notice for the purpose of modifying Sangamo's permit to reflect the above effluent limitations.

Sangamo Electric

Dated: October 13, 1976

By: J. C. Hydrick
J. C. Hydrick, Vice-President

Jack E. Ravan
Jack E. Ravan, Regional Administrator
Environmental Protection Agency
Region IV, Atlanta, Ga.

J. C. Hawkins
J. C. Hawkins, S. C. DHEC

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region IV, Surveillance and Analysis Division
College Station Road, Athens, Georgia 30601

SUBJECT: PCB Sampling, Sangamo Electric Company,
Pickens, SC

DATE: SEP 21 1976

FROM: J. H. Finger, Director
Surveillance and Analysis Division

TO: Paul J. Traina
Enforcement Division

SUMMARY

Attached are analytical data for samples collected by the Surveillance and Analysis Division at Sangamo on September 15-16, 1976. The higher than normal concentration in the effluent sample (SNG-003) was probably caused by an aerator stirring up the pond bottom. (The aerators were not operating during previous sampling).

ACTION

Your information.

BACKGROUND

Continuing monitoring of Sangamo Electric, Pickens, SC

Attachment

DATA REPORTING SHEET

PROJECT Sangamo Electric CHEMIST E. W. Loy RECEIVED 9/16/76 COMPLETED 9/20/76
(water) Pickens, SC

ANALYSES TO BE RUN			Aroclor 1016	Aroclor 1016	Aroclor 1016	Aroclor 1254	Aroclor 1254	Aroclor 1254	Total PCB's	
SAD 7.NO.	STATION NO.	DATE SAMP.	$\mu\text{g/l}$	$\mu\text{g/l}$ Average	% RSD	$\mu\text{g/l}$	$\mu\text{g/l}$ Average	% RSD	$\mu\text{g/l}$	
2255-X	SNG-001	9/15-16/76 1150 - 1140	7.7	7.6	2.3	0.73	0.71	5.0	8.31	
2255-Y	SNG-001	9/15-16/76 1150 - 1140	7.5			0.69				
2256-X	SNG-003	9/15-16/76 1215 - 1215	102	104	2.6	90	90	1.0	194	
2256-Y	SNG-003	9/15-16/76 1215 - 1215	105			91				
2257-X	SNG-026	9/16/76 1375	57	57	0	ND	ND	---	57	
2257-Y	SNG-026	9/16/76 1375	57			ND				
2258-X	RW-01	9/16/76 1300	ND	ND	---	ND	ND	---	ND	
2258-Y	RW-01	9/16/76 1300	ND			ND				
N =	None Detected									
Minimum Detection Limit			0.03			0.06				
SNG-001 - Influent to treatment system.										
SNG-003 - Effluent from treatment system.										
SNG- 026 - Spring near 2nd Sangamo treatment pond										
RW-01 - Raw water from men's rest room next to boiler room.										
<i>SPLIT SAMPLE</i>									<i>TOTAL PCB</i>	
<i>SNG-003</i>									<i>GALONAGE</i>	<i>SUMET</i>
									<i>36.</i>	<i>21.4</i>
<i>SNG-003</i>									<i>4.</i>	<i>1.83</i>

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region IV, Surveillance and Analysis Division

College Station Road, Athens, Georgia 30601

SUBJECT: PCB Sampling, Sangamo Electric Company,
Pickens, SC

DATE: SEP 29 1976

FROM: J. H. Finger, Director

TO: Paul J. Traina
Enforcement Division

SUMMARY

Attached are analytical data for samples collected by the Surveillance and Analysis Division at Sangamo on September 20-21, 1976.

ACTION

Your information.

BACKGROUND

Continuing monitoring of Sangamo Electric, Pickens, SC.

Attachment

RECEIVED
EPA/REGION IV
SEP 30 3 16 PM '76
ENFORCEMENT
DIVISION

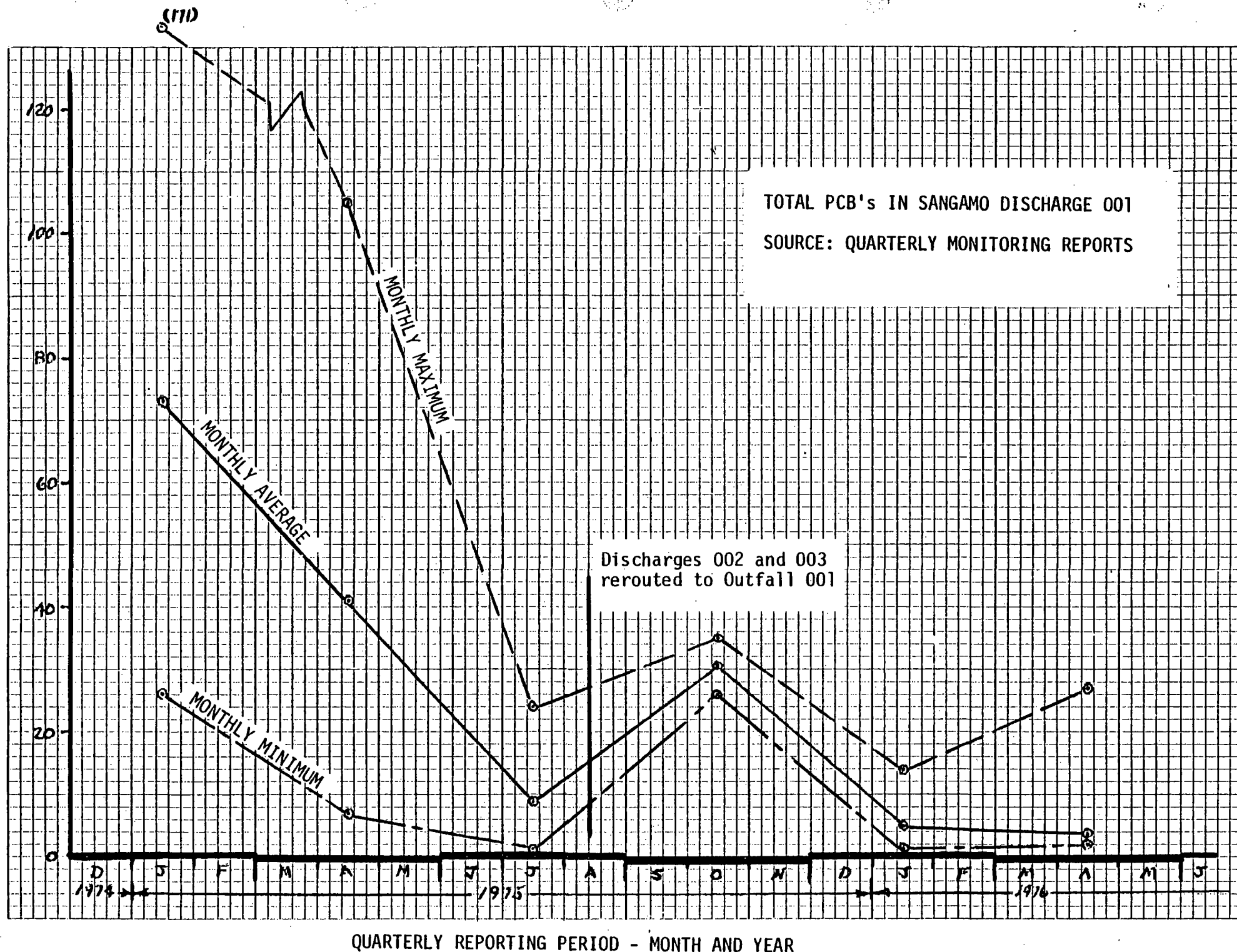
DATA REPORTING SHEET

PROJECT Sangamo CHEMIST E. W. Loy RECEIVED 9-20-76* COMPLETED 9-27-76
(Water) Pickens, SC 9-21-76**

[illegible]

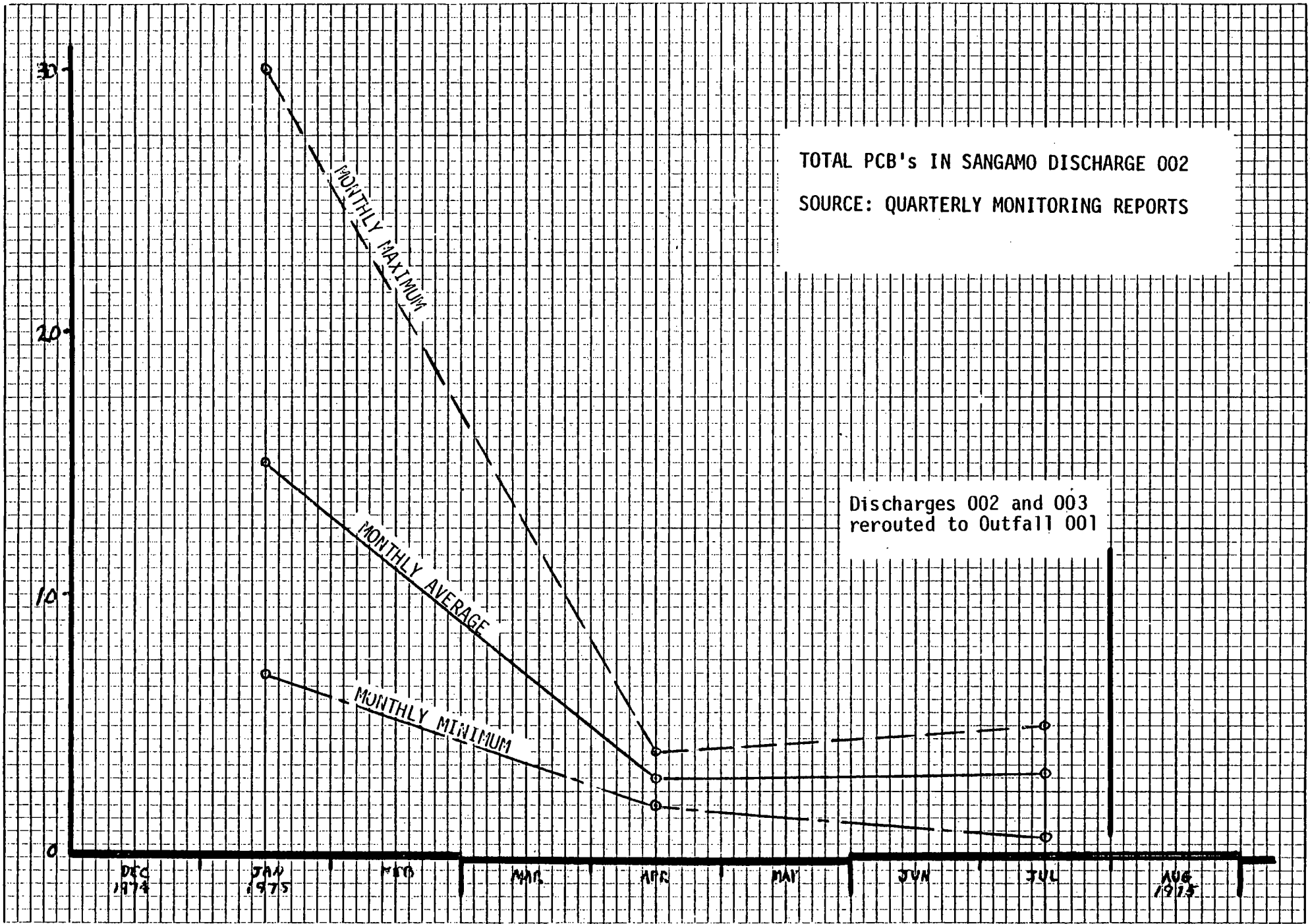
27

CONCENTRATION OF TOTAL PCB's - PARTS PER BILLION



Ex 2761

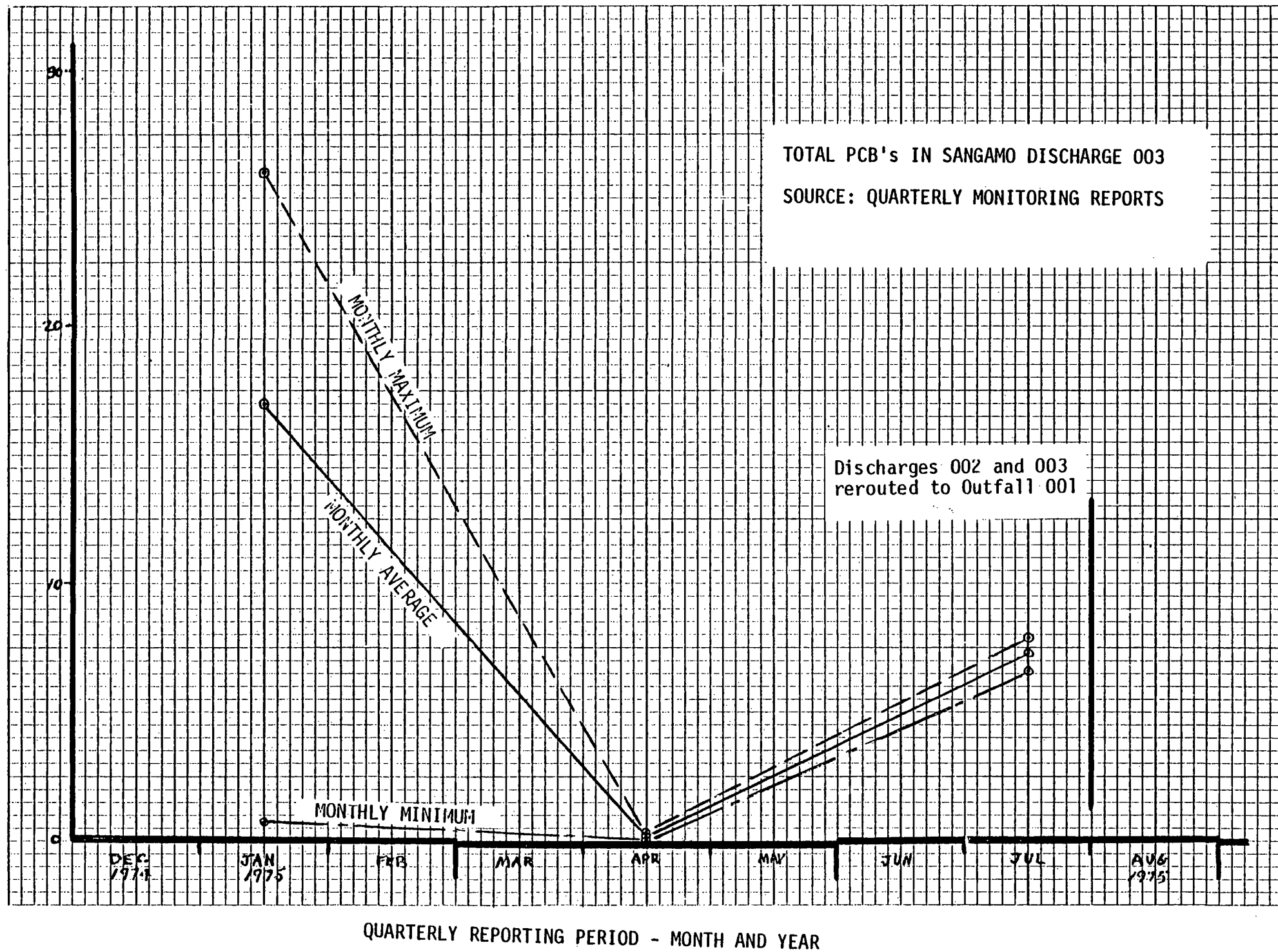
CONCENTRATION OF TOTAL PCB's - PARTS PER BILLION



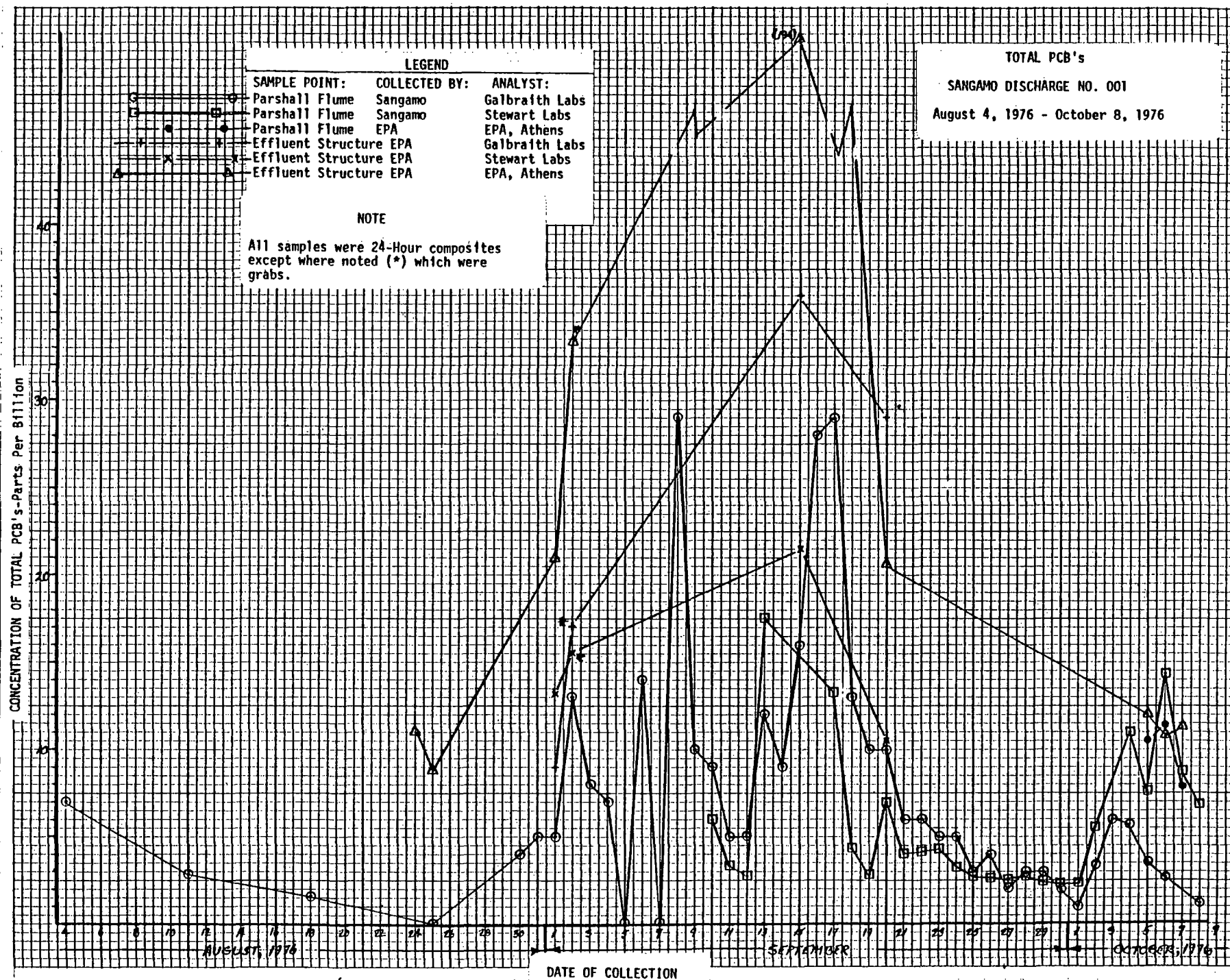
QUARTERLY REPORTING PERIOD - MONTH AND YEAR

EX-076

CONCENTRATION OF TOTAL PCB's - PARTS PER BILLION



Ex 2760



EX 2761

28

ANALYSIS FOR PCB'S - SANJUAN TREATMENT FACILITY EFFLUENT & INFLUENT

TOTAL PCB'S - PARTS PER BILLION (PPB)

TREATMENT PLANT EFFLUENT						TREATMENT PLANT INFLUENT					
	DATE SAMPLED	SAMPLED BY	EPA (SAM)	GALBRAITH LAB	STUART LAB		EPA (SAM)	GALBRAITH LAB	STUART LAB		
1	8-4	SAUG		7							
2	8-11	SAUG		2.9							
3	8-18	SAUG		1.6							
4	8-24/25	EPA	11.	2.			50	14.			
5	8-25/26	EPA	8.8	N.D.			58.	12.			
6	8-25	SAUG		N.D.				15.			
7	8-30	SAUG		4.				28.			
8	8-31	SAUG		5.				14.			
9	9-1	SAUG		5.				20.			
10	9-1/2	EPA	20.9	9.	13.2		101.2	39.	69.		
11	9-2/3	EPA	33.3	17.	15.5		112.8	33.	46.		
12	9-2	SAUG		13.				20.			
13	9-3	SAUG		8.				27.			
14	9-4	SAUG		7.							
15	9-5	SAUG		N.D.							
16	9-6	SAUG		14.				18.			
17	9-7	SAUG		N.D.							
18	9-8	SAUG		29.				9.			
19	9-9	SAUG		10.							
20	9-10	SAUG		9.	6			1.	11.3		
21	9-11	SAUG		5.	3.4			7.	14.54		
22	9-12	SAUG		5.	2.7			6.	3.9		
23	9-13	SAUG		12.	17.6			5	7		
24	9-14	SAUG		9.							
25	9-15	SAUG		16.				5			
26	9-15/16	EPA	194.	36.	21.4		8.3	4	1.8		
27	9-16	SAUG		28.							
28	9-17	SAUG		29.	13.3			5	1.9		
29	9-18	SAUG		13.	4.3						
30	9-19	SAUG		10.	2.8						
31	9-20	SAUG		10.	7.				1.3		
32	9-20/21	EPA	20.6								

10/12/76

COMPILATION OF RESULTS
SANGAMO ELECTRIC COMPANY
PICKENS, SC

	RAW WATER <u>µg/l</u>	INFLUENT <u>µg/l</u>	EFFLUENT <u>µg/l (#/day)</u>
8/24-25/76	----	50.2	10.5(0.101)
8/25-26/76	----	57.9	8.84(0.085)
9/01-02/76	----	101.2	20.9(0.204)
9/02-03/76	----	112.8	33.3(0.319)
9/15-16/76	----	8.31, 7.81*, 22.1**	194, (2.022), 235*, 158.5**
9/16/76	ND	----	-----
9/20-21/76	----	4.84, 5.0*, 1.49**	20.6, (0.198), 8.55** 19
10/05-06/76	----	1.90	12.0(0.066), 10.6***
10/6/76	<0.13	----	----- 5 6
10/06-07/76	----	2.35	10.8(0.060), 11.4*** 8.7
10/07/76	<0.10	----	-----
10/07-08/76	----	3.6	11.2(0.074), 7.9*** 6.7 1.1
10/08/76	<0.10	----	-----

*EMSL Split

**SC Split

***Sangamo Effluent Sampling Point

Ex 28(2)

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FRIDAY, JULY 23, 1976



PART IV:

**ENVIRONMENTAL
PROTECTION
AGENCY**



WATER PROGRAM

Proposed Toxic Pollutant
Effluent Standards for
Polychlorinated Biphenyls

federal register

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 129]

[FRL 585-5]

WATER PROGRAM

Proposed Toxic Pollutant Effluent Standards for Polychlorinated Biphenyls

Notice is hereby given that the Environmental Protection Agency, pursuant to the authority contained in section 307(a) of the Federal Water Pollution Control Act (the Act) as amended by the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500, 86 Stat. 816, 33 U.S.C. 1251 et seq.), proposes additional sections to Part 129, setting forth proposed effluent standards for polychlorinated biphenyls (PCBs). On June 10, 1976, the Agency proposed a new Part 129, setting forth proposed effluent standards for the following toxic pollutants: aldrin/dieldrin, DDT (DDD, DDE), endrin and toxaphene, 41 F.R. 23576 et seq. On June 30, 1976, the Agency proposed effluent standards for benzidine, 41 F.R. 27012 et seq. Those five pollutants, as well as polychlorinated biphenyls (PCBs), were included on a list of toxic pollutants previously published by the Agency pursuant to Section 307(a) (1), 38 F.R. 24342 et seq. (September 7, 1973).

Section 307(a) (2) of the Act provides as follows:

Within one hundred and eighty days after the date of publication of any list, or revision thereof, containing toxic pollutants or combination of pollutants under paragraph (1) of this subsection, the Administrator, in accordance with section 553 of Title 5 of the United States Code, shall publish a proposed effluent standard (or prohibition) for such pollutant or combination of pollutants which shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on such organisms, and he shall publish a notice for a public hearing on such proposed standard to be held within thirty days. As soon as possible after such hearing, but not later than six months after publication of the proposed effluent standard (or prohibition), unless the Administrator finds, on the record, that a modification of such proposed standard (or prohibition) is justified based upon a preponderance of evidence adduced at such hearings, such standard (or prohibition) shall be promulgated.

The regulations proposed at this time establish effluent standards for manufacturers of PCBs and manufacturers of transformers and capacitors which contain PCBs. Standards are proposed for both existing and new sources.

The following, together with the materials and information hereinafter referred to and incorporated by reference, sets forth the basis and purpose of the effluent standards proposed at this time.

SUMMARY OF PRINCIPAL FEATURES AND BENEFITS OF THE PROPOSED REGULATIONS

The regulations here proposed would establish effluent standards for all man-

ufacturers of PCBs and manufacturers of transformers and capacitors who use PCBs and who discharge directly into the navigable waters. Standards are established for both existing and new sources. Owners and operators of facilities which discharge into publicly owned treatment works, as defined in section 212 of the Act (sometimes referred to as "indirect dischargers"), are not covered by the standards herein proposed. However, the Agency will propose pretreatment standards in due course for such indirect discharges pursuant to the authority contained in section 307(b) of the Act following proposal of these standards.

The term polychlorinated biphenyls refers to a family of organic chemicals which have been produced and marketed in this country for approximately 45 years. These organic chemicals are synthetically made and consist of a number of chlorinated biphenyl isomers. They are highly stable compounds and are used primarily as dielectric and heat transfer fluids, though they have other uses as well. PCBs have been conclusively demonstrated to produce lethal and sublethal toxic effects at low dose levels upon a wide range of fish, mammals, and other wildlife, and have also demonstrated adverse health effects to humans. Moreover, they are highly mobile and persistent in the environment, and bioaccumulate greatly in tissue.

The sole manufacturer in the United States, Monsanto Industrial Chemicals Company, currently produces approximately 40 million pounds of PCBs per year. Imports of PCBs currently amount to about 0.4 million pounds per year. Since 1970 Monsanto has voluntarily restricted its domestic sales of PCBs to use in transformers and capacitors (closed systems). Consequently Monsanto and the manufacturers of transformers and liquid-filled capacitors are significant sources of further contamination or potential contamination resulting from the discharge of domestically manufactured PCBs into the aquatic environment.

The proposed standards include a prohibition on discharge of PCBs by any PCB manufacturer. With respect to any manufacturer of transformers or capacitors, a prohibition of any PCBs in any effluent discharge of process wastes is proposed, with limited exceptions, and an average daily concentration limit per month of 1 µg/l is proposed for any other discharge. For new sources, a prohibition on discharge of PCBs in process wastes in conjunction with an average daily concentration limit per month of 0.1 µg/l for other discharges is proposed.

Regulation of discharges under the Act cannot, by itself, guarantee an ample margin of safety for all organisms and human health even if all point source discharges were prohibited, in light of the serious environmental problem which already exists. Data available to the Agency indicate that the standards proposed at this time will however result in maximum feasible progress, within

the inherent limitations of point source discharge control, towards the degree of protection for aquatic and other organisms and human health envisioned under the Act, and are technologically achievable by industry. The Agency will continue to review the standards established in this rulemaking as additional data become available to determine whether further protection, including more stringent standards, is necessary and feasible.

I. BACKGROUND

A. PCBs IN THE ENVIRONMENT

PCBs are a class of organic compounds manufactured by the chlorination of biphenyl with anhydrous chlorine using iron filings or ferric chloride as a catalyst. The biphenyl molecule has a total of ten carbon-hydrogen bonds at which chlorine substitution can be accommodated. In the manufacture of PCBs, anywhere from one to ten chlorine atoms may be located on the biphenyl molecule. Depending upon the location of these substitutions, theoretically as many as 209 separate compounds, or isomers, of the chlorinated biphenyl family can be manufactured.

The PCBs manufactured by Monsanto are marketed under the trade name Aroclor, followed by a four digit number, with "biphenyl" represented by the first two digits "12", and the approximate chlorine percentage represented by the second two. Thus, Aroclor 1242 is a mixture containing approximately 42 percent chlorine. The principal Aroclors which have been marketed over the past decade by Monsanto are 1221, 1232, 1242, 1248, 1254 and 1260, although at this time there is no active marketing of 1232, 1248 or 1260. In addition, Aroclor 1016 (an exception to the previously identified nomenclature system) is being marketed, and bears approximately 41.3 percent chlorine. For an extensive discussion of the chemical and physical properties of PCBs, see O. Hutzinger, S. Safe, and V. Zitko, "The Chemistry of PCBs." CRC Press, 1974.

The unique physical and chemical properties of PCBs include low vapor pressure at ambient temperatures, resistance to combustion, remarkable chemical stability, high dielectric constant and high specific electrical resistivity and low water solubility. At the same time, PCBs are lipid soluble and hence the potential for absorption into fatty tissue and into the liver is high. Thus, once ingested PCBs are retained by most organisms rather than excreted. The qualities of persistence which make PCBs useful for many industrial purposes greatly aggravate their potential for harm in the ecosystem.

Although the principal uses of PCBs today are in "closed" electrical systems (transformers and capacitors), PCBs have been used over the years for a variety of more "open" uses resulting in greater direct contamination of the environment. These other uses include an additive in investment casting waxes, lubricant additives, hydraulic and com-

pressor fluid, carbonless copy paper, plasticizers, paints, heat exchange fluids, certain types of paper and sealants. Most of these uses have been substantially curtailed, but the PCBs which have entered the environment as a result of these uses, and which continue to be placed in the environment, will be there for many years. Some of these uses are resulting in effluent discharges which are not subject to the standards proposed at this time owing to insufficient data. As such data become available, however, the Agency expects to take appropriate measures to control such discharges pursuant to the Act or other applicable statutory authority.

It is estimated that over the past 45 years approximately 1.4 billion pounds of PCBs have been produced in the United States, of which 1.25 billion have been used in this country and the balance exported. Of this 1.25 billion pounds, approximately 960 million pounds have been used in electrical equipment. In addition, it is estimated that only approximately 50 million pounds have degraded, that 750 million pounds are presently in service, and that 450 million pounds are in landfills (ostensibly as a result of disposal) and in air, water, soil and sediments.

In contrast, it is estimated that discharges to the aquatic environment each year from the approximately 37 manufacturers of capacitors and transformers, plus Monsanto, probably do not exceed 10,000 pounds, with direct discharges from these sources accounting for less than one-third this amount. Although efforts to reduce substantially and eventually eliminate this source of environmental contamination will have a relatively minor effect on the overall PCB problem as it currently exists, such efforts are likely to have a more significant impact in reducing future environmental contamination and in alleviating the specific environmental problems in the immediate receiving waters. Consequently the Agency believes that the standards proposed at this time will constitute an important element in the overall effort to reduce and ultimately eliminate any further addition of PCBs to the environment.

B. PRIOR REGULATORY ACTION AND RELATED EFFORTS TO REDUCE ENVIRONMENTAL EXPOSURE

Because of the demonstrated toxicity of PCBs and the human health threat posed by ingestion of PCBs through the food chain, the Food and Drug Administration (FDA) of the Department of Health, Education and Welfare established temporary tolerances for PCBs in food pursuant to the Federal Food, Drug and Cosmetic Act, 21 CFR 122.10 (July 6, 1973). These tolerances included, for example, 5 parts per million (ppm) in the edible portion of fish and shellfish, 2.5 ppm in milk and dairy products, 5 ppm in poultry, 0.5 ppm in eggs and 0.2 ppm in infant and junior foods. On February 26, 1976, FDA announced that it is actively considering a lower temporary tolerance for fish in light of recent toxicological data concerning PCBs, 41 FR 8409. FDA has also banned PCBs for use in food and feed processing.

The American National Standards Institute has issued guidelines for industry on the use, disposal and labelling of PCBs, and is currently considering more extensive guidelines for the handling, servicing and disposing of existing equipment containing PCBs.

The General Services Administration (GSA) has banned PCBs in carbonless copy paper purchased by the Federal government and the Department of the Interior (DOI) has prohibited the use of PCBs in offshore oil operations.

The Environmental Protection Agency (EPA) has proposed regulations pursuant to section 311 of the Federal Water Pollution Control Act to control spills of numerous identified hazardous substances, including PCBs. These regulations are intended to establish reporting requirements, to establish harmful quantities, and to fix civil penalties for spills. The Agency further anticipates use of its authority under section 311 to require industry to prepare spill prevention control plans.

The Agency, in October, 1975, issued in draft form a set of water quality criteria pursuant to section 304(a) of the Act recommending maximum permissible concentrations in the ambient water for numerous pollutants, including PCBs. The concentration level proposed at that time was 0.001 µg/l for PCBs. That document is currently being reviewed prior to final publication.

On April 1, 1976, the Agency issued recommended procedures for disposal of PCBs by industrial users, pursuant to section 204(b) of the Solid Waste Disposal Act, 41 FR 14134.

On July 6, 1973, the Agency published in the FEDERAL REGISTER a proposed list of nine toxic pollutants pursuant to section 307(a) (1) of the Act, 38 FR 18044. The nine substances were: aldrin/dieldrin, benzidine, cadmium, cyanide, DDT (DDD, DDE), endrin, mercury, polychlorinated biphenyls and toxaphene. Following receipt of public comment, the list was promulgated on September 7, 1973, together with a discussion of the Agency's selection criteria and a response to comments received on the proposed list, 38 FR 24342 et seq. The promulgated list consisted of the same nine substances previously proposed.

On December 27, 1973, the Agency proposed toxic pollutant effluent standards for each of these nine substances, together with a summary of the factors considered in setting the standards, and a list of point source categories of discharges proposed for coverage, 38 FR 35388 et seq. In accordance with section 307(a) (2) of the Act, a formal rulemaking hearing on the proposed standards was scheduled. A prehearing conference was held on January 25, 1974, followed by a thirty day evidentiary hearing held during April and May. During the course of those hearings, which were held under severe time constraints, the Agency became aware of certain gaps in its data base. As a result, the Agency determined

at the conclusion of the hearings that the record did not contain sufficient evidence on which to promulgate responsible and defensible standards. Accordingly, the Agency decided to gather additional data and repropose its standards, supported by an expanded data base. The standards proposed at this time thus supersede the PCBs portion of the proposal of December 27, 1973.

The Agency's decision to gather additional data and to repropose standards was discussed at considerable length in the Preamble to the Notice of Proposed Toxic Pollutant Effluent Standards for Aldrin/Dieldrin, DDT, Endrin and Toxaphene, published in the FEDERAL REGISTER on June 10, 1976, 41 FR 23576, to which the reader is referred and which is hereby incorporated into this PCB statement of basis and purpose by reference.

II. THE PROPOSED STANDARDS

GENERAL PROVISIONS

The notice of proposed rulemaking published on June 10, 1976, proposed provisions of general applicability to all standards issued under section 307(a). These were set forth as §§ 129.1 through 129.8. Those Sections are promulgated will be applicable to standards established hereunder for polychlorinated biphenyls. Owners and operators of facilities which are or may be subject to the standards proposed herein are expressly referred to that notice of proposed rulemaking for provisions relating to scope and purpose, definitions, abbreviations, compliance procedures (including notification to the Regional Administrator or State Director of an approved NPDES permit program, as appropriate), of any discharge subject to these standards, requirements and procedures for establishment of a more stringent effluent limitation than that established in these proceedings, and compliance date.

THE STANDARDS FOR POLYCHLORINATED BIPHENYLS

In the notice of proposed Toxic Pollutant Effluent Standards published June 10, 1976, standards were proposed for aldrin/dieldrin, DDT (DDD, DDE), endrin and toxaphene in Sections 129.100 through 129.103 respectively. In addition, the Agency has proposed to add a new § 129.104 containing effluent standards for benzidine, 41 FR 27012 (June 30, 1976).

The standards proposed herein would add a new Section 129.105 to provide coverage for PCBs for new and existing sources in the following industrial categories: Manufacturers of PCBs, manufacturers of transformers, and manufacturers of capacitors. Coverage is provided for both new and existing sources, and for purposes of these standards, a new source is defined as any source on which construction is begun following the date of this proposed rulemaking, if standards are subsequently promulgated pursuant to this proceeding. The Agency's data indicate that these standards will cover at least three plants manufacturing transformers, and at least

seven plants manufacturing capacitors, all of which are existing direct dischargers.

Each section includes specialized definitions of the point source category covered and prescribes acceptable analytical methods. In addition, provision is made for determination of weights and concentrations. In cases where a discharge is allowed, the standard will be specified as an average monthly concentration limit and a maximum concentration at any time.

In developing the standards proposed herein the Administrator has given careful consideration to each of the factors enumerated in section 307(a)(2). These factors include "the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on such organisms." In light of the Act's manifest concern for public health, which is reflected both in the statute and the legislative history, the Administrator has also considered available data concerning human health effects attributable to PCBs. The data considered by the Administrator relating to these factors of toxicity and environmental effect are set forth in a "Criteria Document." The Agency was assisted in the preparation of this criteria document by Ian C. T. Nisbet, Ph.D., of the Massachusetts Audubon Society, a nationally recognized expert on the toxicology of PCBs. This document is hereby incorporated by reference as a part of the statement of basis and purpose for the standards hereinafter proposed.

In addition, the Administrator has considered the availability of various methods of control and related technology by which discharge of PCBs might be eliminated or reduced. His authority to consider technology as well as economic impact is discussed in detail in the preamble portion of the Notice of Proposed Toxic Pollutant Effluent Standards published on June 10, 1976, to which the reader is referred.

In order to obtain relevant data for this function, the Agency engaged the services of Versar Inc., of Springfield, Virginia, who are recognized experts in the study of wastewater treatment technology and the control of pollutants emitted by industrial sources. Versar Inc. has prepared and submitted a report to the Agency concerning industrial discharge of PCBs and the assessment of wastewater management and treatment technology, including technologies which are actually in use or which are or may be available to industries to control or eliminate the discharge of PCBs. This report is entitled "Assessment of Wastewater Management, Treatment Technology, and Associated Costs for Abatement of PCB Concentrations in Industrial Effluents," and is hereby incorporated by reference as a part of the statement of basis and purpose of the standards herein proposed, along with a supplement thereto entitled "PCBs Water Elimina-

tion/Reduction Technology and Associated Costs, Manufacturers of Electrical Capacitors and Transformers; Addendum to Final Report, Task II."

Copies of the aforesaid criteria document and reports and supporting materials, as well as other materials which form a part of the basis and purpose for these standards and which are listed on Appendix A below, are available for public inspection and copying at the U.S. Environmental Protection Agency, Public Information Unit, Room 2922 (EPA Library), 401 M St., SW., Washington, D.C. 20406, during normal business hours. Copies of the criteria document and technology report and supplement may also be inspected and copied at libraries in each of the 10 EPA regional offices.¹

The approach utilized in arriving at the standards herein proposed may be generally stated as follows.

First, because the most important element in setting the standards is the toxicity considerations enumerated in section 307(a)(2), the starting point is the development of the criteria document, which sets forth extensive data with respect to the environmental effects and behavior of PCBs. A principal objective of the criteria document is to seek to arrive at an ambient level of PCBs based upon the data which will provide an ample margin of safety for all important aquatic organisms and others up the food chain, including man, who may become exposed to it. This ambient water criterion is expressed as a concentration of the pollutant in the water in terms of micrograms per liter ($\mu\text{g/l}$) ($1 \mu\text{g/l} = \text{one part per billion}$). For substances such as PCBs where the data indicate that chronic toxic effects may occur at extremely low concentrations, it becomes virtually impossible to state with confidence that any number above zero provides an ample margin of safety for man. In such cases any criterion level chosen should be appropriately qualified to reflect these circumstances.

The toxicity data used in developing these proposed standards were derived from laboratory studies as well as field observations on the effects and behavior of PCBs. These studies have been conducted on a variety of organisms including invertebrate, vertebrate, and mammalian test species, and are well documented in the scientific literature. These studies provided extensive acute and chronic toxicity data based primarily on feeding experiments for a wide range of aquatic organisms and consumers of aquatic organisms.

Studies documenting bioaccumulation in the food chain organisms and bioconcentration by organisms directly from the water provided an important additional component data base. Appropriate human toxicity data and studies

of mammalian carcinogenesis, where available, were also considered, as were data on persistence and degradability.

Data on toxic effects of pollutants are not available for all species that may be exposed to toxic pollutants in the complex ecosystem. There is a vast number of species throughout the entire ecosystem, and it would be impractical to try to gather test data on every one, or even most of them. Because such data are not available on all species, the range of sensitivity of a smaller number of tested species is used to provide a measure of the range of sensitivity of all species. The Agency's criterion for PCBs is based upon a wide range of toxicity data for a phylogenetic cross section of organisms as well as species representative of a wide geographic distribution.

Section 307(a) requires consideration of the importance of organisms likely to be affected. Ecological importance of an organism is dependent on the role the organism plays within the ecosystem and upon its relationship to the food chain within the aquatic community and the consumers of aquatic life, including man. Thus, toxicity data for the carnivores at the top of the food chain in a given ecosystem, as well as economically important species such as trout, salmon, menhaden and shrimp are properly considered in the development of a protective criterion level. Toxicity data for organisms such as diatoms, crustaceans and aquatic insects are also important since these organisms are a food base for higher consumers and are representative of plants and invertebrate species found in most waters of the United States.

On the basis of the foregoing data, a concentration level is sought which, it is believed, will provide that degree of safety required by the Act for all important organisms likely to be affected by it assuming a continued or chronic presence of the pollutant at that level in the water. In the case of PCBs, as discussed below, this proved to be an extremely difficult task in view of the already dangerously high levels of PCBs in some water bodies.

After arriving at an ambient water criterion, the Agency examined feasible control technology to ascertain what concentration levels industrial dischargers might be able to achieve in their effluents, the availability of substitute products for PCBs, and other factors relevant to the setting of standards. This process is discussed more specifically below (see "Rationale for Standard"), after the following summary of the Agency's consideration of the available data base.

(1) *Composition, chemical and physical characteristics of PCBs.* The commercial mixtures of PCBs have been reasonably well characterized. Each mixture contains 10 to 20 major components and a number of minor components; more than 80 of the 209 chlorinated biphenyl (CB) isomers have been identified in the commercial mixtures. After release into the environment the constitution of the mixtures changes as some components are degraded while others persist. Since

¹ The Agency also intends that the criteria document and technology report and supplement be made available through the National Technical Information Service in Springfield, Virginia.

some components are more toxic than others, this complicates the evaluation of the hazards posed by environmental residues.

Highly toxic impurities, polychlorinated dibenzofurans (PCDFs), are present in small quantities in the range of 1 to 33 milligrams per liter (mg/l) in most commercial mixtures. Products manufactured overseas frequently contain more PCDFs than American-made Aroclor mixtures. There is evidence that PCDFs may be formed from PCBs both in service, and in the environment by photochemical and metabolic processes. Accordingly, the toxicity of PCB mixtures is variable and environmental residues are sometimes more toxic than freshly manufactured products. However, it is not possible to separate the toxic effects of PCDFs and PCBs satisfactorily, and the environmental hazards of both must be considered together.

PCBs are viscous liquids or waxes. They are freely soluble in organic solvents and in lipids (fats), but have very low solubility in water. In general, those PCBs with fewer chlorine atoms per molecule are more soluble in water and more volatile than those with greater chlorine atoms per molecules. Accordingly, the mixtures are differentiated during volatilization and solution, the lower CBs being more mobile. PCBs are strongly adsorbed onto surfaces and particles. In the aquatic environment their behavior is often controlled by the presence and movement of sediments.

(2) *Relevant use and wastewater characteristics*—(A) *Manufacturing of PCBs*. The sole domestic manufacturer of PCBs is the Monsanto Industrial Chemicals Company ("Monsanto"), whose manufacturing operations are conducted at its William G. Krummrich plant in Sauget, Illinois. Aroclors 1221 and 1016 are used by capacitor manufacturers as dielectrics. Aroclors 1242 and 1254 are used as principal ingredients in formulating the Askarels used by transformer manufacturers.

Monsanto discharges its effluent to the Sauget POTW, and therefore is not covered by the standards proposed at this time. The Agency expects in due course to propose pretreatment standards applicable to this facility and to any other facility which may in the future manufacture PCBs. A brief discussion of Monsanto's operations and wastewater characteristics is appropriate here, however, in view of the fact that standards are proposed at this time for direct discharges for the PCB manufacturing category for existing and new sources. Monsanto's ability to achieve zero direct discharge was also considered in proposing these standards.

The Krummrich plant has a design capacity to produce 48 million pounds of PCBs per year. In 1974, Monsanto produced 40,466,000 pounds, of which 34,406,000 pounds were sold domestically. Approximately two-thirds of 1974 domestic sales were of Aroclor 1016 with most of the remaining production evenly divided between Aroclors 1242 and 1254. Only small quantities of Aroclor 1221 were produced.

The raw wastes from the manufacturing area at Monsanto consist of the liquor from the scrubber, the condensate from the steam jet ejectors, water used for showers and eye baths, miscellaneous floor wash drains, waste oil collected in drip pans and drums, and so-called "montars" which are the bottoms from their stills. The composition and quantities of the individual waste streams are not monitored. All effluent streams generated in the manufacturing area are collected in sumps located in this area. Reportedly the aqueous discharges amount to 750 ug/l PCBs in 0.432 million gallons per day ("MGD") or 2.7 lb/day.

The raw wastes generated in the incinerator area at Monsanto consist of the venturi scrubber liquor and the waste phase from the oil-water separator sump. Reportedly the aqueous discharges from this area amount to 15 ug/l PCBs in 0.288 MGD or 0.36 lb/day. The total plant uses a maximum of 0.389 MGD of water principally for cooling and a maximum of 360,000 lbs of steam.

In addition to the aqueous discharges, it has been estimated that about 25 lbs. of scrap oil and "monstar" are produced per ton of PCB produced, that about 5½ lbs of PCB in contaminated solids per ton of PCB produced are landfilled daily and that less than 1 lb/day of PCBs is lost as air emissions.

(B) CAPACITOR MANUFACTURING

There are nineteen plants operated by seventeen companies manufacturing PCB impregnated capacitors in the United States. At the present time approximately 95 percent of all liquid-filled capacitors manufactured in the United States are of the PCB impregnated type. The two most frequent applications of these capacitors are for phase corrections on power lines connected to electrical motors and for use as ballast for fluorescent lighting systems. The PCB usage in this category was approximately 22,000,000 lbs. in 1974 with most of this being Aroclor 1016. At least seven of the nineteen capacitor manufacturing plants have direct discharges to the navigable waters and are therefore covered by the standards proposed at this time.

Most plants manufacture either large power capacitors or small industrial type units but not both. The large capacitors are either flood filled or manifold filled. All small capacitors are flood filled either in a vacuum tank or in an automatic "carousel" arrangement.

The raw wastes originating from these plants consist of scrap PCBs collected in sumps, drums and drip pans; contaminated vacuum pump oils; the fractionator bottoms from the trichloroethylene recovery; the caustic bath used at some plants, for purposes of paint stripping; spent detergent wash and rinse water from capacitor or component cleaning operations; rinse water used in the welding and plating operations; steam condensate from jet ejectors; the seal water used in vacuum pumps; water used in phosphatizing and fluoride bath; water spray used in paint booths; boiler blowdown; and cooling tower blowdowns.

Effluents from plants in this category range between 2,500 gallons per day to 1.26 MGD. These effluents are discharged into the navigable waters or are introduced into POTWs without any treatment directed toward PCB removal. Effluent information obtained for 14 plants indicated that average effluent PCB concentrations ranged from less than 10 ug/l to more than 6,000 ug/l. Average mass emissions of PCBs from these plants ranged from less than 0.01 lb/day to nearly 2.5 lb/day.

(C) TRANSFORMER MANUFACTURING

There are eighteen transformer plants operated by thirteen companies which manufacture transformers using PCB-containing Askarel dielectric fluids. Askarel transformer oils are blends of 60 to 100 percent Aroclor 1254 or 1242 and trichlorobenzene. This type of transformer constitutes only five to ten percent of these plants' transformer manufacturing volume. The remaining manufacturing volume uses mineral oil as the dielectric fluid, and there is some manufacture of air-cooled or gas-cooled transformers as well. Askarel transformers are used when other types are unsatisfactory because of design limitations or where flammability is a problem. The PCB usage in this category was approximately 12,000,000 lbs in 1974. At least three of these plants have direct discharges and are therefore subject to the standards proposed at this time.

There are two principal types of transformers produced: electrical distribution transformers which are used to step down voltages, and power transformers which are primarily used to step up voltages. Distribution transformer applications include use in networks, pad-mounted and pole-mounted, and special precipitator power supplies located in closed proximity to hot gas stacks. Quantities of Askarel used in transformers of this type range from 500 to 5,000 lbs each. Many of these transformers have provisions for venting with spring loaded venting devices or diaphragm rupture discs.

Askarel power transformer applications include use in primary and secondary substations, industrial furnaces, rectifiers, rail transportation, and for reactance and grounding functions. Quantities of Askarel used in transformers of this type range up to 19,000 lbs.

Various transformer assembling and filling procedures are being practiced throughout the industry. In general, the transformer assembling and filling operations consist of a predrying step for removing moisture from the transformer interiors, several stages of Askarel filling and topping, addition of electrical connections and bushings, electrical testing and sealing.

Water is not an essential component of transformer manufacturing. In general, the process raw wastes from these plants consist of waste Askarel collected in sumps or pans at the filling stations, contaminated vacuum pump seal oil, contaminated kerosene-like petroleum distillate, and contaminated Askarel used

for transformer interior flushing. PCB wastes which reach water streams at these plants are due to occasional loss during handling and residuals accumulated around drainage systems from past operations when insufficient precautions were taken against PCB losses.

Based on information from five plants, effluents from plants in this subcategory ranged from 13,500 gal/day to nearly 1.9 MGD. These effluents (predominantly cooling water) are discharged into the navigable waters or are introduced into POTWs without any treatment directed toward PCB removal. Average effluent PCB concentrations ranged from less than 2 µg/l to nearly 30 µg/l. Average mass emissions of PCBs from these plants range from less than 0.002 lb/day to nearly 0.1 lb/day.

(3) *Toxicity.* PCBs inhibit growth and cell division in certain species of phytoplankton (single-celled aquatic plants). Some sensitive species are affected at very low concentrations (0.1 µg/l). The effects are particularly marked in mixed cultures, where sensitive diatoms are replaced by resistant green algae.

PCBs are toxic to aquatic insects, crustaceans, and other invertebrates at concentrations down to a few µg/l. Reproduction and growth in aquatic invertebrates are adversely affected at concentrations as low as 0.4–0.5 µg/l. PCBs affect the settlement of larvae and reduce the diversity of marine invertebrate communities at concentrations as low as 0.1 µg/l.

PCBs are acutely toxic to estuarine aquatic organisms. For Aroclors 1016, 1242 and 1254, the 48-hour LC50 values for brown shrimp, pink shrimp, and grass shrimp fall in the range between 9 and 32 µg/l. In longer-term bioassays of two weeks or more, Aroclor 1254 is toxic to the commercially valuable penaeid shrimp and grass shrimp at concentrations as low as 0.9 to 1.4 µg/l. Arthropods are affected at 0.1 µg/l.

Rainbow trout have been killed by exposure to Aroclor 1248 at concentrations of 3.4 µg/l in 25 days, and by exposure to Aroclor 1260 at 5 µg/l in 10 days. Spot and pinfish died when exposed for 14 to 45 days to 5 µg/l of Aroclor 1254. The longnose killifish has been killed by long-term exposure to Aroclor 1254 at a concentration of 1 µg/l.

PCBs have adverse effects on survival, growth, and reproduction of fish at concentrations as low as 1 µg/l. In one case, eggs from fish exposed to only 0.1 µg/l failed to hatch after being placed in PCB-free water. A variety of other sublethal toxic effects have been observed on a wide range of freshwater and marine fish present in waters throughout the country, and these are set forth in detail in the Agency's criteria document for PCBs.

PCBs generally have low acute toxicity to birds and mammals, but long-term dietary exposure leads to a variety of chronic toxic effects.

Rats are relatively resistant to PCBs and usually do not show the characteristic lesions of the skin and stomach induced in several other mammals. The

most characteristic effects in rats are enlargement of the liver, induction of hepatic microsomal enzymes and porphyria. Reproduction is adversely affected at dietary levels at and above 20 parts per million (ppm); 1 ppm is comparable to a liquid measurement of 1 milligram per liter (1 mg/l).

Rhesus monkeys are extremely sensitive to PCBs, which induce skin lesions and gastric ulceration. Monkeys exposed to 2.5 ppm suffered reproductive dysfunctions and some died after exposure to only 3 ppm. Adult female Rhesus monkeys fed 25 ppm of Aroclor 1248 not only accumulated the PCBs in their adipose tissue, but the PCBs were transferred across the placenta of one female which gave birth and concentrated at high levels in the fat and adrenals of the infant.

Mink are also very sensitive to PCBs. In one experiment, most females died on a diet containing 10 ppm and none produced young at 5 ppm. In another test 0.64 ppm caused total reproductive failure and a few deaths.

(4) *Carcinogenesis.* On prolonged exposure of rats and mice, PCBs cause a variety of morphological changes in the liver, including hypertrophy, hyperplasia, adenofibrosis and nodular hyperplasia. At high dose levels (100 ppm and above) PCBs induce hepatomas, neoplastic nodules and carcinomas in rats and mice and therefore pose a presumptive carcinogenic risk to man. In one experiment, PCB-treated rats also displayed an increased incidence of pituitary tumors.

Metabolism of PCBs in mammals and birds proceeds primarily through arene oxide (epoxide) intermediates, which are biologically active and believed to be highly toxic and carcinogenic. PCBs also have immunosuppressive effects in rabbits and guinea pigs. In several experiments treatment with PCBs has increased the susceptibility of animals to various diseases.

(5) *Human health effects.* Humans occupationally exposed to PCBs sometimes suffer from an occupational disease known as chloracne, characterized by long-lasting skin lesions and sometimes systemic disturbances.

In a large-scale poisoning incident in Japan in 1968, more than 1,000 persons became sick with Yusho disease after ingesting rice oil contaminated with both PCBs and PCDFs. Their symptoms were similar to those of occupational chloracne, but also included hyperpigmentation of the skin, persistent eye discharge and gastric disturbances. Children were affected not only by direct ingestion of the contaminated oil, but also prior to birth by transplacental passage and in one case a child was contaminated by its mother's milk. The affected persons have improved only slowly since 1968 and there are already indications of excess cancer incidence.

The Rhesus monkey provides an important indication for human sensitivity to PCBs and, as noted above, is extremely sensitive to low levels of exposure. The symptoms following exposure appear si-

milar in many respects to those observed among the population contaminated in the Yusho incident.

(6) *Persistence, mobility and degradability.* PCBs have a long life in the environment, often in excess of 25 years, but components with three or less chlorine atoms disappear rapidly. Mono-, di, and tri-CBs are to some extent degraded or metabolized by bacteria, but higher PCBs are resistant to microbial degradation. Tetra-chlorinated PCBs can be metabolized by birds and mammals, but penta-chlorinated PCBs are resistant and higher CBs are metabolized only very slowly. Most environmental residues have been reported in the form of tetra and higher chlorinated PCBs.

PCBs are mobile in the environment and are carried freely in the air and the water attached to airborne or waterborne particles. Conventional incineration and other disposal techniques do not completely destroy PCBs.

(7) *Bioaccumulation and biomagnification.* PCBs are strongly concentrated ("bioaccumulated") from water into aquatic invertebrates and fish. Bioaccumulation factors (concentration of PCBs in organisms compared to concentration in water) for these organisms are commonly in the range of 20,000–274,000 after prolonged exposure in the laboratory. However, where measurements of concentrations in natural waters are available, bioaccumulation factors in fish and invertebrates are generally larger than those measured in the laboratory. There have been reports that certain animals captured from the aquatic environment have apparently bioaccumulated PCBs in their flesh to levels of between 3 and 10 million times that of the water concentration in which the animals were captured. It is important to note, however, that the level of PCB contamination in the food of the captured aquatic life, as well as the concentration of PCBs in which these organisms resided for the predominance of their life periods, are unknown.

Fish in Escambia Bay, Florida, had PCB levels in their flesh 670,000 over the ambient water in which they were captured. PCB levels in the waters of Lake Michigan average around .01 µg/l. However, PCB levels in fish in Lake Michigan range in the 2 to 20 ppm range, wet weight (16–200 ppm, lipid weight) indicating an apparent bioaccumulation factor ranging up to at least 2,000,000 in whole fish. Levels of PCBs in some whale and seal blubber were found to be in excess of 1 million in the ambient water concentration in which the animals were taken.

PCBs are further concentrated (bio-magnified) from the food of birds and mammals into their tissues, especially into their fat. Biomagnification factors (ppm in organisms/ppm in food) are often in the range 1 to 10 after prolonged exposure in the laboratory, but are often as high as 10 to 100 in wild animals and birds. Humans store PCBs in their fat more efficiently than any animal for which precise measurements have been

made. This leads to greater exposure to sensitive organs and tissues in humans than in animals exposed to the same concentrations of PCBs in the diet. The data indicate, in particular, that Aroclors 1016 and 1242 are widely present in fish in the United States. This in turn leads to substantial exposure of humans and other fish-eating animals.

(8) *Ambient water criterion for effects on natural systems.* The foregoing summary briefly highlights the extensive data base set forth in the criteria document. This data base demonstrates that PCBs pose a serious threat to a wide range of aquatic and other food chain organisms, as well as to human health, at very low concentration levels. There appear to be some variations in the toxic effects for different isomers. Thus, the more highly chlorinated isomers appear to be somewhat more persistent in the environment, while the lower chlorinated isomers appear to be somewhat more acutely toxic. These differences are relatively minor, since all isomers which are significant constituents of commercial mixtures of PCBs are highly persistent and mobile in the environment, and all isomers display a degree of toxicity which is a matter for grave public concern. Moreover, the composition of PCB mixtures changes as they are transported through the environment. There is also evidence that toxic metabolites, or breakdown products, may be formed, so that the chemical species distribution in a water body may not be the same as the species distribution of the substance discharged. For all these reasons, there appears to be no sound basis for setting different criterion numbers or standards for different isomers, and accordingly, the criterion and standards herein proposed are for PCBs generically.

A criterion level of 0.001 $\mu\text{g/l}$ would appear to avoid adverse effects to most aquatic organisms, based upon an analysis of both laboratory and field data. This level is based primarily on the bioaccumulation properties of PCBs. Fish have been shown to accumulate PCBs by factors as high as 274,000 in the laboratory, while considerably higher factors appear to occur in their natural environments. Based upon a bioaccumulation factor of 274,000 a concentration of 0.001 $\mu\text{g/l}$ could result in bioaccumulation to 0.274 ppm in flesh, which is below the dietary levels which have been shown injurious to aquatic birds and mammals who may feed upon them. In addition, however, there is evidence that in some waters some fish bioaccumulate at rates roughly ten times this, and in waters where the chronic level generally exceeds 0.001 $\mu\text{g/l}$, such as Lake Michigan, there is evidence of sublethal toxic effects on the fish.

In proposing this ambient water criterion the Agency recognizes the possibility that such water quality level may not provide absolute safety for all organisms in all waters. Indeed there probably is no numerical concentration level above zero which one can at this time say with great confidence provides an

"ample margin of safety" for all organisms under all circumstances. However, the data do establish, at this time, that an ambient water quality level of 0.001 $\mu\text{g/l}$ should not be exceeded.

To assess risks to humans, the most critical toxic effects of PCBs are those observed in mammals at the lowest exposure levels. These include:

(i) Mortality and reproductive failure in mink at a dietary level of 0.64 ppm.

(ii) Increased liver weight in weanling rats in the second generation of animals exposed to 1 ppm, and liver pathology (including nodules) in the second generation exposed to 20 ppm.

(iii) Stomach nodules and ulcerations in dogs at a dietary level of 1 ppm: Stomach lesions have also been reported from other species including monkeys, pigs and mink.

(iv) Reproductive failure, dermal and stomach lesions in Rhesus monkeys exposed to 2.5 ppm and deaths at 3.0 ppm.

(v) Increased activity of hepatic microsomal enzymes in rats fed at 0.5 ppm for 4 weeks.

(vi) Carcinogenic effects in rats and mice at dietary levels of 100 ppm and above.

(vii) Apparent increase in incidence of pituitary tumors in rats at dietary levels of 1 ppm and above.

(viii) Widespread presence of PCBs in fish and other organisms regularly consumed by humans.

All if these effects are relevant in weighing potential adverse effects of PCBs on humans. In particular, the symptoms of poisoning in monkeys, including dermal and gastric lesions, are parallel to those observed in man; enzyme induction is a basic biochemical effect which has been observed in many species; carcinogenic effects in rodents are generally used to predict potential carcinogenicity in humans.

It is difficult to use the results of these experiments to establish acceptable levels of exposure for humans: (a) Because many of the listed effects were reported at the lowest dietary levels investigated; (b) because humans are exposed for much longer periods (including prenatal exposure) than the experimental animals; and (c) because humans are known to store PCBs in their tissues more efficiently than the experimental animals. These data do, however, further support the proposition that an ambient water quality level of 0.001 $\mu\text{g/l}$ should not be exceeded, and, beyond this, that every reasonable effort should be made to limit discharges of PCBs in order to minimize human exposure.

(9) *Control technology available.* At the present time there are no direct discharges of PCBs from a PCB manufacturer and thus no in-place technology to evaluate. The only U.S. manufacturer, Monsanto, discharges to the Saugat, Illinois POTW. With respect to process waste effluents from PCBs users, water is unnecessary to the processes involved in the manufacture of liquid-filled capacitors or transformers. Consequently for process waste (with certain specified

exceptions), a prohibition on discharge is achievable based upon currently available technology and handling methods.

Based upon detailed plant inspections and examinations of the process steps in the use of PCBs in the manufacture of capacitors and transformers it has been determined that the characteristics of these wastes are sufficiently similar so that the same kinds of control and treatment technologies are applicable.

The wastewater characteristics for manufacturers of capacitors and transformers have been described above. Data available to the Agency indicate that water can be eliminated from most if not all of the manufacturing-related processes, with the result that potential effluents can be sufficiently reduced in quantity so that they can be incinerated or otherwise disposed of so as to reduce greatly or eliminate any discharge of process wastes to the navigable waters. Where large volumes of water are used, treatment and subsequent recycling can reduce quantities of unavoidable blowdowns to amounts suitable for treatment by activated carbon and discharge or by incineration.

With respect to capacitor manufacturing wastes, the scrap PCBs collected in sumps, drums, and drip pans, as well as fractionator bottoms from trichloroethylene recovery, are small in amount, and can be incinerated. The same is true for contaminated vacuum pump oils and any caustic baths used for paint stripping. With respect to capacitor and component cleaning operations, cleaning solvents rather than water can be used, and then incinerated following use. Water used in phosphatizing and fluoride baths by some plants can be eliminated, along with the entire process, by use of aluminum containers.

Capacitor manufacturers who use steel containers generally paint their products, which produces a waste resulting from water spray used to control paint particles and fumes. This process can be eliminated through use of aluminum containers which need not be painted. If painting is nevertheless desired, effluent discharge can be avoided by use of an air or electrostatic system instead of a waterfall for trapping paint particles and fumes.

Aqueous discharge from cooling tower blowdowns can be reduced by use of a recycling system based on demineralization or, alternatively, by incineration of blowdown. Any solid waste residue, which will not include PCBs, can be disposed of by landfill. Boiler blowdown, which is not likely to contain any PCBs, can be sealed in drums and landfilled or treated by the activated carbon treatment system.

With respect to transformer manufacturers, as with capacitor manufacturing, all scrap PCBs collected in sumps or pans can be incinerated. Contaminated vacuum pump seal oil, petroleum distillate, and askarel used for transformer interior flushing can also be incinerated. Each of these controls has been demonstrated by use by at least one of the covered plants.

Several potential sources of process-related waste may in some cases result in effluents which cannot be avoided feasibly in the near term: Rinsewater used in welding, painting or plating operations, and scrubber and quench water from incinerator operations.

These categories of process-related discharges, as well as non-process related effluents, including plant washdown, non-contact cooling water, and runoff from stormwater or spills, can be treated by carbon adsorption as described below.

It should be noted that EPA-sponsored investigations have revealed that there are no in-place processes being employed whereby dissolved or sorbed PCBs in water streams are being either extracted from those streams or destroyed within them. In general, these waste streams contain concentrations of PCBs of less than 1 $\mu\text{g/l}$ up to about 500 $\mu\text{g/l}$ with many instances occurring in the 10 to 50 $\mu\text{g/l}$ range. While several of the plants have practiced PCB segregation to keep the quantity of contaminated wastewaters as low as possible, none has installed full scale terminal PCB removal facilities.

The EPA through its contractor, Versar, Inc., has identified a technology which will reduce the PCB concentration in wastewaters to 1 $\mu\text{g/l}$ or less and which is capable of being installed within one year. The identified system is based upon activated carbon adsorption, following primary treatment consisting of sedimentation, filtration, and skimming. The feasibility of achieving the 1 $\mu\text{g/l}$ or less level has been demonstrated in laboratory tests conducted cooperatively between Versar, Inc., and two activated carbon suppliers, Carborundum Company and ICI-U.S. The system consists of an equalization-settling tank and mixed media filtration followed by carbon adsorption. Floatables and sludges from the equalization-settling tank and spent carbon are disposed of by incineration. Carbon adsorption has also been successfully used in full-scale operation to achieve removal of pollutants other than PCBs down to comparably low levels.

Based on work performed cooperatively between Versar, Inc., and Houston Research on one system and Westgate Research on another system, it was indicated that systems employing ozonation in conjunction with ultraviolet radiation can be designed to achieve any desired effluent PCB concentration. Preliminary comparisons of the capital costs between the ozone-UV system and activated carbon system show at least a 100 percent greater cost for the ozone-UV system. When pretreatment costs are included the ozone-UV system is only about 10 percent higher than activated carbon. It is doubtful however, that the ozone-UV system could be installed within one year, the maximum period of time between promulgation and the effective date of these standards.

Other systems evaluated included adsorption by polymeric resins, catalytic reduction and catalytic oxidation. In-

sufficient information was available to evaluate these systems.

(10) *Economic impact.* The Agency recognizes that there may be significant costs and economic impacts associated with the standards proposed at this time. The Agency has made a preliminary assessment of costs and economic impact, which is summarized below. Preliminary cost estimates, as set forth in the report submitted by Versar, Inc. (See Appendix A hereto, item 4), indicate that compliance with the proposed standards may result in additional costs of production equal to or greater than five percent of the selling price of the products (transformers and capacitors), thus identifying this regulation tentatively as a major action requiring the preparation of an Inflation Impact Statement (IIS) pursuant to Executive Order 11821. A more detailed assessment is currently being prepared by the Agency, and will be accompanied by an IIS, if necessary. The availability of these documents upon their completion will be announced in the FEDERAL REGISTER, and public comments thereon will be invited. These documents, together with all public comments thereon which are received by the Hearing Clerk postmarked not later than thirty days following the aforesaid notice of availability of these documents, shall be made a part of the record of these rulemaking proceedings (see Public Participation in Rulemaking Process, below). The standards are being proposed at this time prior to completion of the economic impact assessment in light of the order and decree entered by the United States District Court in *Natural Resources Defense Council et al. v. Train*, Civ. No. 2153-73, and consolidated cases, on June 9, 1976, requiring proposal of these standards by July 14, 1976.

The Agency's preliminary assessment of costs and economic impact suggests that transitional impacts may be significant. The preliminary estimate of the cost of compliance indicates aggregate capital costs for the direct dischargers of \$12 million and total annual costs of \$7 million (based on a 3-year depreciation schedule). The annualized costs represent 5 to 21 percent of current selling prices for transformers and 3 to 17 percent for capacitors, the indicated ranges resulting from the types of transformers and capacitors produced. These costs may be of sufficient magnitude to induce closures of some small and/or marginal plants and conversion to substitute materials for others. It is not certain that such conversions could be carried out in the one year allowed by the Act without causing disruption of the supply of transformers and capacitors. Additional analysis will be carried out to assess more completely these types of impacts, as well as to identify other types of economic effects.

In addition, the EPA is currently engaged in issuing NPDES permits pursuant to section 402 of the Act applicable to point sources which will be covered by those proposed standards. In some instances the limitations being proposed in

those permit proceedings are less stringent than the limitations which would be required by these proposed standards under section 307(a). The Agency invites comments on the comparative technology, costs, and resulting economic impacts associated with those limitations as compared with the standards hereinafter proposed. If interested persons believe that a modified standard is preferable to that proposed, they should take appropriate measures to develop and enter into the record the appropriate supporting data and information (see Public Participation in Rulemaking Process, below).

(11) *Rationale for standard.* In discussing the establishment of an ambient water criterion number above, it was emphasized that a concentration of .001 $\mu\text{g/l}$ should not be exceeded and, in addition, that every reasonable effort should be made to limit discharges of PCBs in order to minimize human exposure. Indeed the data suggest that to provide an "ample margin of safety" for human health, and possibly for some other organisms as well, an ambient water criterion far lower than .001 $\mu\text{g/l}$ may be required, though at this time one cannot confidently identify any specific number above zero.

At the present time, even if every point source discharge were prohibited, PCB concentrations in the water would remain for a long time not only above zero, but in some water bodies, above .001 $\mu\text{g/l}$. Moreover, since the capability does not exist presently to measure PCB concentrations below 0.001 $\mu\text{g/l}$ with any reasonable degree of reliability, no useful purpose would be served in establishing a criterion number below this.

In light of the foregoing considerations, the Administrator has weighed carefully the desirability and feasibility of imposing a prohibition on any discharge of PCBs from any point source. In the case of existing manufacturers, this can be done since the only present PCB manufacturer does not have a direct discharge. A similar requirement is imposed upon new PCB manufacturing sources, who would be required in effect to either achieve a completely closed system or discharge into a POTW. With respect to transformers and capacitors, both these industries provide important products to the United States economy for which there are no presently proven substitutes. Moreover, the best reduction levels which available technology can achieve with respect to an effluent discharge containing PCBs appear to be 1 $\mu\text{g/l}$ through the use of carbon adsorption treatment. This exceeds the ambient water criterion by three orders of magnitude.

Discharge of relatively modest amounts of a pollutant into the water at many times the ambient water criterion may be allowed, however, without necessarily failing to provide safety for affected organisms. First, the actual discharge concentration does not normally remain the ambient concentration. In fact, the effluent disperses following discharge and becomes greatly diluted. The area of di-

lution is often referred to as a "mixing zone", and will vary in size and shape from one body of water to the next and from one discharge to the next. The result of this phenomenon is that once the effluent reaches the outside of the mixing zone, the pollutant concentration may have become diluted by a factor of several hundred or more, and indeed may not even be detectable by the most sophisticated monitoring equipment. Concededly, in some instances there may be adverse effects on some organisms in the immediate vicinity of the outfall. However, for chronic effects to be observed, the exposure time would have to be quite lengthy—perhaps a lifetime. Even acute toxic effects, which normally occur at much higher dosage levels than chronic effects, are generally recorded based upon a 96-hour exposure. Because of the extraordinary persistence of PCBs reliance on mixing zones, while of assistance in the immediate future, cannot be regarded as a long-term solution to the problem.

In developing the proposed standards, the Agency also considered the availability of substitutes for PCBs in transformers and capacitors. Several companies have developed products which they believe are an adequate substitute for PCBs in transformers and efforts are under way to develop substitutes for PCBs in capacitors as well. At this time, however, it is still too early to determine with confidence whether the substitutes are not only functionally effective but, in addition, are safe in terms of potential fire hazard and other safety considerations, and are environmentally safe. The Agency has concluded that it cannot at this time set a toxic pollutant effluent standard, or prohibition on discharge, upon the assumption of the ready availability of a substitute product. However, the Agency is pursuing an active policy to encourage industry to develop as rapidly as possible feasible substitutes for PCBs.

Because of the absence of any proven satisfactory substitute for PCBs in certain transformers and capacitors, it must be recognized that to impose a prohibition on all PCB-containing effluents at this time would probably cause a severe impact on the transformer and capacitor manufacturing industries which utilize PCBs, and deprive the nation of the future availability of products which utilize such transformers and capacitors. Accordingly, in the proposed standards the Administrator is requiring that discharges be prohibited where possible, and that other discharge comply with the very best results which available technology can achieve. For the manufacturing of transformers and capacitors, the standards are based on the following tabulation:

Wastewater type	Type of technology applied
Non-contact cooling water.	Cool in closed radiator system and recycle.
Steam jet condensate.	Replace steam jets with mechanical pumps.
Detergent washing water.	Replace with solvent vapor degreasing.

Wastewater type	Type of technology applied
Boiler blowdowns.	Filter, demineralize, and recycle.
Incinerator scrubber water.	Pretreatment and carbon adsorption to 1 µg/l or less.
Process-associated wastes. ¹	Pretreatment and carbon adsorption to 1 µg/l or less.
Sanitary waste waters.	To POTW.
Rainfall runoff----	Enclose areas or pretreatment and carbon adsorption.

¹Includes hot solder dip rinse water, phosphatizing bath wastewaters, tin plating bath and rinse waters, fluoride bath and rinse waters and painting water spray. These are small in volume and may occur in only a single plant.

Using this technology results in a prohibition on discharge of PCBs from any point source to the navigable waters involving solely process wastes with the exceptions noted in the above table, which would be treated with activated carbon to the 1 µg/l level or lower. This technology substantiates a standard of a prohibition of PCBs in process wastes (except for certain specified wastes) and treatment of other discharges with activated carbon, reducing PCBs to 1 µg/l or less. Although occasional deviations are unavoidable, at no time may any such allowed discharge exceed 5 µg/l for samples representing a working day.

For new sources, where further technology advances can be reasonably expected, a more stringent limitation may be set to take such expected advances into account, including advances in control technology and in substitutes for PCBs. Limitations of 0.1 µg/l on the daily average per month and 0.5 µg/l maximum at any time should be achievable (the ozonation-UV data so indicate) and are therefore proposed as new source standards for non-process wastewater discharges from transformer and capacitor manufacturers, and from discharges resulting from scrubber and quench water from incinerator operations. For the reasons discussed above, no new source discharge of PCBs will be allowed which result from jet ejectors or rinsewater from welding or plating operations.

The maximum daily permissible concentration is based upon an application factor of five times the maximum average monthly concentration factor. This is provided to take into account the fact that occasional daily concentrations may exceed the required maximum monthly average. They should not be allowed at any time to exceed the lowest feasible ceiling, however, and the Agency's information with respect to carbon absorption and analogous treatment techniques indicate that a variability factor of five is achievable and reasonable.

Translating an ambient water criterion number to an end-of-the-pipe standard is at best an imprecise calculation. The dispersion and dilution factors discussed above are expected to result, in

most receiving waters, in the achievement of the degree of protection envisioned by the Act. The Agency recognizes, however, that there may be a few cases where, because of local receiving water conditions, notably with respect to hydrology, sufficient dispersion and dilution may not take place. To deal with such cases, § 129.7 of Subpart A (the general provisions of Part 129; see standards proposed on June 10, 1976, 41 FR 23576) allows the applicable NPDES permit issuing authority to impose such more stringent effluent limitations as may be required in order to achieve or approach the ambient water criterion level, in this case .001 µg/l, at least beyond the boundaries of any reasonable mixing zone. In addition, more stringent levels may be imposed to meet any applicable water quality standard, see § 129.5(e). It is possible that an exercise of these provisions could result in a plant closure.

However, by allowing some consideration for technology in the initial standard-setting, even though consideration of ecological and health effects are paramount, the approach taken under these standards makes it reasonably probable that if there are to be any shutdowns, they will occur only after a site-specific examination, and only because of a failure to meet the safety requirements of section 307(a).

Finally, it is recognized that to allow a discharge at the proposed levels may pose some risk of adverse effects to some organisms, particularly those located near the outfall, and possibly to the consumers thereof. However, based upon preliminary information, this risk is deemed to be outweighed at this time by the social and economic benefits represented by not setting a standard which would force widespread closures of plants manufacturing capacitors and transformers, which would in turn be likely to sharply curtail the nation's supply of these essential products, or lead to importation of products containing dielectrics which are even more environmentally hazardous.

(12) *Subsequent review of standards.* It continues to be the goal of the Agency to reduce the presence of PCBs in the environment to the greatest extent possible as rapidly as feasible, for all of the reasons outlined above. Indeed, as additional data become available to the Agency, it may be necessary to revise in subsequent proceedings both the standards and the ambient water criterion established pursuant to the present rulemaking in the direction of greater stringency in order to provide the degree of safety required by the Act.

The Agency is obligated to review and where necessary, revise its section 307(a) standards at least every three years. The Agency intends to review the proposed standard one year following promulgation, with the expectation that industry will have made significant strides towards the development of reliable substitutes for PCBs, as well as in the field of control technology, so that a prohibition on all discharges of PCBs in any industrial effluent can be considered at that

time, including sources not covered by the standards proposed at this time.

III. PUBLIC PARTICIPATION IN RULEMAKING PROCESS

A public hearing to consider the proposed effluent standards will be held pursuant to section 307(a)(2) of the Act commencing on August 20, 1976, at 10:00 a.m. in Room 2409, Waterside Mall, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. In accordance with the Agency's rules of practice governing public hearings on effluent standards for toxic pollutants, 40 CFR Part 104 as amended, 41 FR 17898 et seq. (April 29, 1976), the first hearing day shall include a prehearing conference at the above time and place. All persons interested in participating in those hearings as objecting parties should refer to the amended rules of practice, 41 FR 17898 et seq., and should not rely on previous editions. Any person who has any objection to any standard proposed herein may file with the Hearing Clerk (A-100), Room 1019 WSME, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, within 25 days of the date of this notice, a statement of objection in triplicate which shall meet all of the requirements of 40 CFR 104.3 (a) and (b). These Sections require, among other things, actual receipt by the Hearing Clerk of any objection within the aforesaid time. The presiding officer may refuse to permit any person to participate in said hearing who fails to comply with any of the provisions of those sections.

In addition to the foregoing, any person interested in this proposed rulemaking but who does not participate as a party in the formal hearing may submit written comments to the Agency on the proposed rulemaking. Such comments should be filed in triplicate, if possible, and should be addressed to: Hearing Clerk (A-100), Room 1019 WSME, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. All comments which are received by the hearing clerk and which are postmarked on or before August 20, 1976 shall become a part of the hearing record in the manner prescribed in 40 CFR 104.3(d) and shall be considered by the Administrator prior to the promulgation of final standards.

In addition, in accordance with the discussion above concerning economic impact of the standards proposed at this time, the Agency will publish in the FEDERAL REGISTER approximately ninety days following the date of publication of this notice of proposed rulemaking an announcement of the availability of the Agency's economic impact assessment with respect to the proposed standards. The document or documents setting forth this assessment shall be made part of the record of the rulemaking proceedings on these proposed standards, together with all comments directed specifically thereto which are received by the Hearing Clerk at the above address, and which are postmarked not later than

thirty days following the aforesaid notice of availability. All parties to the public hearing on the proposed standards shall be allowed a reasonable opportunity to examine this economic impact assessment and any comments therein, and to respond thereto on the record. To this limited extent and for this limited purpose only, I hereby waive the time deadline requirements for the filing of public comments under § 104.3(d) of the Agency's Rules of Practice for Public Hearings on Effluent Standards for Toxic Pollutants, 40 CFR Part 104, as amended, 41 FR 17898 (April 29, 1976), so as to allow the filing of materials and comments described in this paragraph within the time period herein set forth, and I accordingly direct the presiding officer at the public hearings to be conducted on these proposed standards to ensure that the record includes all materials which are filed in conformity with this paragraph. The Agency has the legal authority to modify or waive strict compliance with its rules of practice in exceptional circumstances such as the foregoing when the ends of justice require. Cf. *American Farm Lines v. Black Ball Freight Service*, 397 U.S. 532 (1970) and cases cited therein.

Dated: July 14, 1976.

RUSSELL E. TRAIN,
Administrator.

APPENDIX A

1. Criteria Document for Polychlorinated Biphenyls (EPA, Ian C. T. Nisbet, Ph. D., 1976), including general introduction.
2. PCBs in the United States Industrial Use and Environmental Distribution (Doc. No. EPA 560/6-76-005 February 25, 1976).
3. Assessment of Wastewater Management, Treatment Technology and Associated Costs for Abatement of PCBs Concentrations in Industrial Effluents (Doc. No. EPA 560/6-76-006 February 3, 1976).
4. PCBs Water Elimination/Reduction Technology and Associated Costs, Manufacturers of Electrical Capacitors and Transformers; Addendum to Final Report, Task II (July 2, 1976) (supplements item 3).
5. Conference Proceedings of the National Conference on PCBs (Doc. No. EPA 560/6-75-004; Conference held November 1975; proceedings published March 1976).
6. Notice of Proposed Rulemaking: EPA Proposal of Toxic Pollutant Effluent Standards for Aldrin/Dieldrin, DDT (DDD, DDE), Endrin and Toxaphene, 41 FR 23576 (June 10, 1976).

1. In 40 CFR Part 129, Subpart A (as proposed at 41 FR 23576 (June 10, 1976) and amended at 41 FR 27017 (June 30, 1976) the table of contents is further amended to read as follows:

PART 129—TOXIC POLLUTANT EFFLUENT STANDARDS

Subpart A—Toxic Pollutant Effluent Standards and Prohibitions

- | | |
|-------|--|
| Sec. | |
| 129.1 | Scope and purpose. |
| 129.2 | Definitions. |
| 129.3 | Abbreviations. |
| 129.4 | Toxic pollutants. |
| 129.5 | Compliance. |
| 129.6 | Adjustment of effluent standard for presence of toxic pollutant in the intake water. |

- | | |
|--------------|--|
| Sec. | |
| 129.7 | Requirement and procedure for establishing a more stringent effluent limitation. |
| 129.8 | Compliance date. |
| 129.9-129.99 | [Reserved] |
| 129.100 | Aldrin/Dieldrin. |
| 129.101 | DDT, DDD and DDE. |
| 129.102 | Endrin. |
| 129.103 | Toxaphene. |
| 129.104 | Benzidine. |
| 129.105 | Polychlorinated Biphenyls (PCBs). |

AUTHORITY.—Secs. 307, 308, and 501 of the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500, 86 Stat. 816, 33 U.S.C. 1251 et seq.).

2. Subpart A of Part 129 is further amended by adding new paragraph (f) to § 129.4 to read as follows:

§ 129.4 Toxic pollutants.

(f) Polychlorinated Biphenyls (PCBs)—polychlorinated biphenyls (PCBs) means a mixture of compounds composed of the biphenyl molecule which has been chlorinated to varying degrees.

3. Subpart A of Part 129 is further amended by adding new § 129.105 to read as follows:

§ 129.105 Polychlorinated biphenyls (PCBs).

(a) *Specialized definitions.* (1) "PCB Manufacturer" means a manufacturer who produces polychlorinated biphenyls.

(2) "Electrical capacitor manufacturer" means a manufacturer who produces or assembles electrical capacitors in which PCB or PCB-containing compounds are part of the dielectric.

(3) "Electrical transformer manufacturer" means a manufacturer who produces or assembles electrical transformers in which PCB or PCB-containing compounds are part of the dielectric.

(4) The ambient water criterion for PCBs in navigable waters is 0.001 µg/l.

(b) *PCB Manufacturer*—(1) *Applicability.* (i) These standards or prohibitions apply to:

- (A) All discharges of process wastes;
- (B) All discharges from the manufacturing or incinerator areas, loading and unloading areas storage areas, and other areas which are subject to direct contamination by PCBs as a result of the manufacturing process, including but not limited to:

- (i) Stormwater and other runoff;
- (ii) Water used for routine cleanup or cleanup of spills.

(ii) These standards do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of PCBs; or to stormwater runoff that exceeds that from the ten year 24-hour rainfall event.

(2) *Analytical Method Acceptable.* Environmental Protection Agency method specified in Part 136 of this chapter, except that a 1 liter sample size is required to increase analytical sensitivity.

(3) *Effluent standards*—(1) *Existing sources.* PCBs are prohibited in any discharges from any PCB manufacturer.

(ii) *New sources.* PCBs are prohibited in any discharge from any PCB manufacturer.

(c) *Electrical capacitor manufacturer—(1) Applicability.* (i) These standards or prohibitions apply to:

(A) All discharges of process wastes; and

(B) All discharges from the manufacturing or incineration areas, loading and unloading areas, storage areas and other areas which are subject to direct contamination by PCBs as a result of the manufacturing process, including but not limited to:

(1) Stormwater and other runoff; and

(2) Water used for routine cleanup or cleanup of spills.

(ii) These standards do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of PCBs; or to stormwater runoff that exceeds that from the ten year 24-hour rainfall event.

(2) *Analytical method acceptable.* Environmental Protection Agency method specified in Part 136 of this chapter, except that a 1 liter sample size is required to increase analytical sensitivity.

(3) *Effluent standards—(i) Existing sources.* (A) PCBs are prohibited in all process wastes discharged with the following exceptions:

(1) Water used in welding, plating or painting operations; and

(2) Scrubber and quench water from incinerator operations.

(B) All other discharges (including each of the exceptions set forth in the preceding section (A)) from a capacitor manufacturer shall not contain poly-

chlorinated biphenyls concentrations exceeding an average per working day of 1 $\mu\text{g/l}$ calculated over any calendar month; and shall not exceed 5 $\mu\text{g/l}$ in sample(s) representing any working day.

(ii) *New sources.* (A) PCBs are prohibited in any process wastes discharged with the exception of scrubber and quench water from incinerator operations; and

(B) All other discharges from a capacitor manufacturer shall not contain polychlorinated biphenyls concentrations exceeding an average per working day of 0.1 $\mu\text{g/l}$ calculated over any calendar month; and shall not exceed 0.5 $\mu\text{g/l}$ in sample(s) representing any working day.

(4) The standards set forth in this Subsection shall apply to the total combined weight or concentration of PCBs, excluding any associated element or compound.

(d) *Electrical transformer manufacturer—(1) Applicability.* (i) These standards or prohibitions apply to:

(A) All discharges of process wastes; and

(B) All discharges from the manufacturing or incineration areas, loading and unloading areas, storage areas, and other areas which are subject to direct contamination by PCBs as a result of the manufacturing process, including but not limited to:

(1) Stormwater and other runoff; and

(2) Water used for routine cleanup or cleanup of spills.

(ii) These standards do not apply to stormwater runoff or other discharges from areas subject to contamination solely by fallout from air emissions of PCBs; or to stormwater runoff that ex-

ceeds that from the ten year 24-hour rainfall event.

(2) *Analytical Method Acceptable.* Environmental Protection Agency method specified in Part 136 of this chapter, except that a 1 liter sample size is required to increase analytical sensitivity.

(3) *Effluent standards—(i) Existing sources.* (A) PCBs are prohibited in any process wastes discharged, with the following exceptions:

(1) Water used in welding, plating or painting operations; and

(2) Scrubber and quench water from incinerator operations.

(B) All other discharges (including each of the exceptions set forth in the preceding section (A)) from a transformer manufacturer shall not contain polychlorinated biphenyls concentrations exceeding an average per working day of 1 $\mu\text{g/l}$ calculated over any calendar month; and shall not exceed 5 $\mu\text{g/l}$ in sample(s) representing any working day.

(ii) *New sources.* (A) PCBs are prohibited in any process wastes discharged, with the exception of scrubber and quench water from incinerator operations; and

(B) All other discharges from a transformer manufacturer shall not contain polychlorinated biphenyls concentrations exceeding an average per working day of 0.1 $\mu\text{g/l}$ calculated over any calendar month; and shall not exceed 0.5 $\mu\text{g/l}$ in sample(s) representing any working day.

(4) The standards set forth in this subsection shall apply to the total combined weight or concentration of PCBs, excluding any associated element or compound.

[FR Doc.76-21354 Filed 7-22-76; 8:45 am]

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

March 19, 1976

MAR 22 12 05 PM '76

ENFORCEMENT
DIVISION

OFFICE OF ENFORCEMENT

MEMORANDUM

TO: Regional Enforcement Directors

FROM: Acting Director, Permits Division (EN-336)

SUBJECT: PCB Limitations in NPDES Permits

In his memorandum of December 22 concerning the Identification and Control of Environmental Sources of PCBs, Mr. Legro stated that by March 31, 1976, your staff should issue a public notice of the proposed issuance or modification of an NPDES permit for any manufacturer of transformers or capacitors which has a direct discharge of PCBs. All such proposed permit terms should require the elimination of PCBs from the discharges as expeditiously as possible.

In particular, public notice for these permits should propose a final limitation of zero discharge for PCBs in process wastewater and in process-related effluents. For non-process water the proposed final terms should be based upon a strong presumption that the dischargers are able to achieve zero discharge. Interim limitations for all such discharges should require a highly restricted daily maximum level of PCBs, with no provision for variances or excursions, and in general a level of no more than a few ounces per day. The final limitations should be achieved no later than July 1, 1977.

For purposes of these permit issuances and modifications, "zero" may be defined in terms of limits of detection of PCBs according to the approved analytical method for chlorinated organic compounds found at 40 CFR 136. Thus, "zero" means that no PCBs are detectable in the discharge according to the approved analytical method. (For a discussion of that method, see my memorandum of January 14, 1976, to Regional Enforcement Directors and others.) The limit of detection of the approved method is in the range of 1 ppb.

Attached is a copy of the separate storm sewer regulations recently promulgated by EPA. In particular, I call your attention to subsections (a)(1) and (a)(2). It is EPA's intent that conventional NPDES permits apply to any individual discharges of storm water runoff which is contaminated by PCBs as a result of contact with wastes, raw materials, or contaminated soil.

In addition to your permitting activities vis-a-vis direct dischargers from these facilities by March 31, 1976, you should also commence activities to eliminate PCBs from discharges into municipal treatment systems. In this regard, see point 5 of Mr. Legro's memorandum of December 22, 1975. Furthermore, as discussed in point 7 of that memorandum, by now you should have taken steps to assure that permits for all power plants contain zero PCB limitations.

The required treatment by capacitor and transformer plants to achieve the discharge goals indicated above would involve essentially complete elimination of process water and substitution of organic solvents, dry cleaning and wiping and dry scrubbing of PCB vapors. Non-process water such as non-contact cooling water and storm water runoff would be recycled as non-process water as much as possible. The plant would be expected to provide an optimal amount of diking and the like in the non-process areas to channel all miscellaneous non-process water for treatment and recycle. All non-process water including storm water runoff should be treated in the following manner:

Settling → oil/water separation → filtration → activated carbon sorption

→ It is expected that by such treatment the concentration level of PCBs in water would be reduced to ≤ 10 ppb, which would render such water capable of being used as non-contact cooling water.

Further details on treatment will be described in forthcoming correspondences.


Carl J. Schafer

Attachment

*
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Permit No. 141

Application No. OYN 036

Applicant's Name: Sangamon Electric Co., Capacitor Division

Location of Facility: Pickens, Pickens Co., South Carolina

Receiving Waters: Iron Creek and an unnamed tributary to Twelve Mile Creek

Effective Date: date of receipt by applicants

Expiration Date: _____

B. SCHEDULE OF COMPLIANCE

1. Achieve compliances according to following schedule:

Submit preliminary engineering report

1 October 1974

Submit final plans

1 January 1975

Begin construction

1 July 1975

Attain compliances

1 January 1976

C. MONITORING AND REPORTING

2. Reporting

Monitoring results obtained during the previous 3 months shall be summarized for each month. . . . The first report is due on 28 September, 1974.
Copies shall be submitted to Regional Administrator and State at addresses below:

EPA

SC

PART II

- A. MANAGEMENT REQUIREMENTS
B. RESPONSIBILITIES

PART III

OTHER REQUIREMENTS

Pesticides

Monitoring

During the period beginning effective date and lasting until 31 December 1975
the permittee is authorized to discharge from outfall(s) serial number(s) 001

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max.	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow-m ³ /Day (MGD)	-	-	-	-	daily	Cont. rec.
BOD ₅	29.9 (66)	120 (263)	-	-	1/wk	24 hr. comp.
TSS	179 (394)	298 (657)	-	-	"	"
Ammonia	.594 (1.31)	5.94 (13.1)	-	-	"	"
Cyanide	.298 (.657)	2.98 (6.57)	-	-	"	"
Aluminum	1.07 (2.36)	5.74 (13.1)	-	-	"	"
Copper	.0544 (138)	2.98 (6.57)	-	-	"	"
Nickel	.239 (526)	2.98 (6.57)	-	-	"	"
Pil & Grease	101 (223)	250 (552)	-	-	"	"
Polychlorinated biphenyls	-	-	-	-	"	"
pH Range: No less than 4.5, nor greater than 9.0, and shall be monitored daily by cont. rec.						
Samples shall be taken at the following locations: at or near the outfall.						

2. During the period beginning 1 January 1976 and lasting until expiration date, the permittee is authorized to discharge from outfall(s) serial number(s) 001.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max.	Other Units Daily Avg.	(Specify) Daily Max.	Measurement Frequency	Sample Type
Flow-m ³ /Day (MGD)	-	-	-	-	<i>daily</i>	<i>Cont. recs</i>
BOD ₅	29.9 (66)	120 (263)	-	-	<i>1/mb</i>	<i>24 hr. comp.</i>
TSS	179 (394)	298 (657)	-	-	"	"
Ammonia	.594 (1.31)	5.94 (13.1)	-	-	"	"
Cyanide	.298 (657)	.596 (1.314)	-	-	"	"
Aluminum	1.07 (2.36)	2.38 (5.25)	-	-	"	"
Copper	.0594 (.131)	.298 (.656)	-	-	"	"
Nickel	.239 (.526)	2.98 (6.57)	-	-	"	"
Oil + Grease	59.4 (131)	89.4 (197)	-	-	"	"
Polychlorinated Biphenyls	<i>non-detectable</i>				"	<i>grab</i> <i>24 hr. comp.</i>

pH Range: No less than 6.0, nor greater than 9.0, and shall be monitored daily by cont. rec.
Samples shall be taken at the following locations: at or near the outfall.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning *effective date* and lasting through *31 December 1975*
the permittee is authorized to discharge from outfall(s) serial number(s) *002*

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	<i>daily</i>	<i>Cont. rec.</i>
BOD ₅	2.61 (5.76)	5.22 (11.52)	—	—	<i>1/wk</i>	<i>24 hr. comp.</i>
TSS	6.64 (14.63)	15.67 (34.55)	—	—	"	"
Ammonia	.052 (.115)	.521 (1.15)	—	—	"	"
Aluminum	.052 (.115)	.261 (.576)	—	—	"	"
Oil & Grease	31.3 (69.1)	52.25 (115.2)	—	—	"	<i>grab</i>
Polychlorinated Biphenyls	—	—	—	—	"	<i>24 hr. comp.</i>

The pH shall not be less than *5.1* standard units nor greater than *9.0* standard units and shall be monitored *daily by cont. rec.*

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at or near the outfall

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning 1 January 1976 and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 062

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	<u>daily</u>	<u>Cont. rec.</u>
BOD ₅	<u>2.61 (5.76)</u>	<u>5.22 (11.52)</u>	—	—	<u>1/week</u>	<u>24 hr. comp.</u>
TSS	<u>6.64 (14.63)</u>	<u>15.67 (34.55)</u>	—	—	"	"
Ammonia	<u>.052 (.115)</u>	<u>.521 (1.15)</u>	—	—	"	"
Aluminum	<u>.052 (.115)</u>	<u>.209 (.461)</u>	—	—	"	"
Oil & Grease	<u>5.22 (11.52)</u>	<u>7.84 (17.27)</u>	—	—	"	<u>grab</u>
Polychlorinated Biphenyls	<u>non-detectable</u>		—	—	"	<u>24 hr. comp.</u>

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by cont. rec.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
at or near the outfall.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning *effective date* and lasting through *31 December 1975*
the permittee is authorized to discharge from outfall(s) serial number(s) *003*

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	<i>daily</i>	<i>Flow Incl.</i>
BOD ₅	<i>.322 (1.709)</i>	<i>.643 (1.42)</i>	—	—	<i>21 month</i>	<i>24 hr comp.</i>
TSS	<i>1.03 (2.27)</i>	<i>1.93 (4.26)</i>	—	—	"	"
Ammonia	<i>.006 (.014)</i>	<i>.064 (.142)</i>	—	—	"	"
Aluminum	<i>.003 (.007)</i>	<i>.032 (.071)</i>	—	—	"	"
Oil + Grease	<i>.707 (1.56)</i>	<i>1.29 (2.84)</i>	—	—	"	"
Polychlorinated Biphenyls	<i>non-detectable</i>		—	—	"	<i>grab</i>
					"	<i>24 hr. comp.</i>

The pH shall not be less than *5.3* standard units nor greater than *9.0* standard units and shall be monitored *daily by grab sample.*

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at or near the outfall.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning 1 January 1976 and lasting through expiration date
the permittee is authorized to discharge from outfall(s) serial number(s) 003

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	<u>daily</u>	<u>Flow-dred.</u>
BOD ₅	<u>.322(.709)</u>	<u>.643(1.42)</u>	—	—	<u>2/month</u>	<u>24 hr. comp.</u>
TSS	<u>1.03(2.27)</u>	<u>1.93(4.26)</u>	—	—	"	"
Ammonia	<u>.006(.014)</u>	<u>.064(1.42)</u>	—	—	"	"
Aluminum	<u>.003(.007)</u>	<u>.026(.057)</u>	—	—	"	"
Calc + Grease	<u>.644(1.42)</u>	<u>.966(2.13)</u>	—	—	"	"
Polychlorinated Biphenyls	<u>non-detectable</u>		—	—	"	<u>grab</u> <u>24 hr. comp.</u>

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at or near the outfall.

f. Description of Discharges (as reported by applicant)

Serial 001 - *process wastewater and storm runoff*

Average Flow - 5961 m³/d (1.575 MGD)
 Average Winter Temperature - 15.6 °C (60 °F)
 Average Summer Temperature - 23.9 °C (75 °F)
 pH Range (std. units) - 4.5-8.0

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u> <i>in kg/day (lbs/day)</i>	
BOD ₅	279 (66)	120 (263)
TSS	179 (394)	298 (657)
Ammonia	.594 (1.31)	5.94 (13.1)
Cyanide	.298 (657)	2.98 (6.57)
Aluminum	1.07 (2.36)	5.94 (13.1)
Copper	.0594 (.131)	2.98 (6.57)
Nickel	.239 (.526)	2.98 (6.57)
Oil & Grease	101 (223)	250 (552)

~~Polychlorinated Biphenyls~~

Serial 002 - *Cooling Water (OK)*

Average Flow - 522 m³/d (.138 MGD)
 Average Winter Temperature - 21 °C (70 °F)
 Average Summer Temperature - 21 °C (70 °F)
 pH Range (std. units) - 5.1-6.7

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>	
BOD ₅	2.61 (5.74)	5.22 (11.52)
TSS	6.64 (14.43)	15.67 (34.55)
Ammonia	.052 (.115)	.521 (1.15)
Aluminum	.052 (.115)	.261 (.574)
Oil & Grease	31.3 (69.1)	5225 (115.2)

~~Polychlorinated Biphenyls~~

Serial 003- Cooling Water

Average Flow - 6435 m³/day (0.17 MGD)
Average Winter Temperature - 21°C (70°F)
Average Summer Temperature - 21°C (70°F)
pH Range (std. units) - 5.3 - 9.0

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>
BOD ₅	.322 (1.09) .643 (1.42)
TSS	1.03 (2.27) 1.93 (4.26)
Ammonia	.006 (.014) .064 (.142)
Aluminum	.003 (.007) .032 (.071)
Oil & Grease	.707 (1.56) 1.29 (2.84)
Polychlorinated Biphenyls	Non Detectable

Serial -

Average Flow -
Average Winter Temperature -
Average Summer Temperature -
pH Range (std. units) -

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>
--------------------------------	----------------------

2. PROPOSED EFFLUENT LIMITATIONS

Serial 001 - Process Wastewater & Storm Runoff

~~Permitted Maximum Temperature - (28.0) (75.0)~~
Permitted pH Range (std. units) - 6.0 - 9.0

<u>Effluent Characteristic</u>	<u>Discharge Limitation</u>	
BOD ₅	29.9 (66)	120 (243)
TSS	179 (394)	298 (657)
Ammonia	5.94 (1.31)	5.94 (13.1)
Cyanide	2.98 (657)	5.94 (1.314)
Aluminum	1.07 (2.36)	2.38 (5.25)
Copper	0.594 (.131)	2.98 (.656)
Nickel	0.239 (.524)	2.98 (.657)
Oil & Grease	59.4 (131)	89.4 (197)
Polychlorinated Biphenyls	Not Detectable	

Serial 002 - Cooling Water

~~Permitted Maximum Temperature - 24.0 (75.0)~~
Permitted pH Range (std. units) - 6.0 - 9.0

<u>Effluent Characteristic</u>	<u>Discharge Limitation</u>	
BOD ₅	2.61 (5.76)	5.22 (11.52)
TSS	6.64 (14.63)	15.67 (34.55)
Ammonia	0.52 (.115)	5.22 (1.15)
Aluminum	0.52 (.115)	2.09 (.461)
Oil & Grease	5.22 (11.52)	7.84 (17.27)
Polychlorinated Biphenyls	Not Detectable	

Serial 003 Cooling Water

~~Permitted Maximum Temperature -~~

Permitted pH Range (std. units) -

~~(5.0-8.0)~~
6.0 - 8.0

Effluent Characteristic

Discharge Limitation

BOD ₅	.322 (.709)	.643 (1.42)
TSS	1.03 (2.27)	1.93 (4.26)
Ammonia	.006 (.014)	.064 (1.42)
Aluminum	.003 (.007)	.026 (.057)
Oil & Grease	.644 (1.42)	.966 (2.13)
Polychlorinated		
Biphenyls		Not Detectable

Serial -

~~Permitted Maximum Temperature -~~

~~Permitted pH Range (std. units) -~~

Effluent Characteristic

Discharge Limitation

32

U.S. Environmental Protection Agency
 Region IV, Permit Branch
 1421 Peachtree Street, N.E.
 Atlanta, Georgia 30309
 404/526-5201

in conjunction with

The South Carolina Dept. of Health and Environmental Control
 2600 Bull Street
 Columbia, South Carolina 29211
 803/758-5483

Public Notice No.

NOTICE OF APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
 AND NOTICE OF PROPOSED STATE CERTIFICATION

*Sangamon Electric Co., Capacitor Division, Pickens Plant, P.O. Box 128, PICKENS, S.C. 29671,
 application no. SC 074 04N 2 000036, has made application to discharge waste into Town Creek.
 Applicant is engaged in the manufacture of capacitors and electrolytes. The one discharge described
 in the application enters Town Creek approximately 16.1 meters (200 feet) upstream of the Highway 23 bridge.*

On the basis of preliminary staff review and application of 86 Stat. 816, 33 U.S.C. 1251 et seq. (1972), 38 Fed. Reg. 13527 et seq. and other lawful standards and regulations, the U.S. Environmental Protection Agency (EPA) proposes to issue a permit to discharge subject to specific pollutant limitations and special conditions. These proposed determinations are tentative.

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPA address above, no later than

. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit application number should be placed on the envelope next to the above address and also at the top of the first page of comments. A public hearing may be held where the EPA Regional Administrator finds a significant degree of public interest in a proposed permit or group of permits.

A fact sheet containing additional details about the application and the proposed determinations, a sketch showing the exact location of the discharge, and additional information on hearing procedure is available by writing or calling EPA. A copy of the draft permit is also available from EPA. The application, comments received, and other information are available for review and copying at Room 309, 1421 Peachtree Street, Atlanta, Georgia, between the hours of 8:15 a.m. and 4:30 p.m., Monday through Friday. A copying machine is available for public use at a charge of 20¢ per page. Information is also available from the S.C.D.H.E.C. office in Columbia.

The South Carolina Dept. of Health and Environmental Control has proposed to certify the discharge in accordance with the provisions of Section 401 of the Federal Water Pollution Control Act, as amended (P.L. 92-500). Persons wishing to comment upon or object to state certification are invited to submit same in writing to the state agency address above no later than . If a public hearing is held, as described above, the state agency will co-chair the hearing in order to receive comments relative to state certification.

Please bring the foregoing to the attention of persons who you know will be interested in this matter.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

FACT SHEET

APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
TO U.S. WATERS

Application No. SC 074 DYN 2 000036

Date _____

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

*Sangamo Electric Co.
P.O. Box 128
Pickens, S.C. 29671*

b. Description of Applicant's Operation

Manufacture of capacitors and electrolytes

c. Production Capacity of Facility

150,000 pieces/day

d. Applicant's Receiving Waters

Lawn Creek

For a sketch showing the location of the discharge(s), see
Attachment A.

e. Description of Existing Pollution Abatement Facilities

*Wastewater flows through traps into neutralization chamber for pH correction, then
to lagoon with 5-day retention time and mechanical aeration.*

f. Description of Discharges (as reported by applicant)

Serial 001 -

Average Flow - 1,229,000 gal/day
~~Average Winter Temperature - N/A~~
~~Average Summer Temperature - N/A~~
pH Range (std. units) - 3.4 - 9.0

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

Effluent Characteristic

Reported Load

	^{avg.} kg/day (lbm/day)	^{Max.} kg/day (lbm/day)
Oil+grease	195.5 (431)	223.6 (493)
BOD ₅	32.7 (72)	37.2 (82)
TSS	196.4 (433)	225.0 (496)

Serial 002 -

Average Flow -
Average Winter Temperature -
Average Summer Temperature -
pH Range (std. units) -

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

Effluent Characteristic

Reported Load

2. PROPOSED EFFLUENT LIMITATIONS

Serial 001 -

Permitted Maximum Temperature - ~~N/A~~

Permitted pH Range (std. units) - 6.0-9.0

Effluent Characteristic

Discharge Limitation

	Aug. kg/d (lbm/d)	Max. kg/d (lbm/d)
oil + grease		
BOD ₅	46.5 (102.5)	69.7 (153.7)
TSS	32.7 (72)	37.2 (82)
phenols	46.5 (102.5)	69.7 (153.7)
	0 (0)	0 (0)

Serial 002 -

Permitted Maximum Temperature -

Permitted pH Range (std. units) -

Effluent Characteristic

Discharge Limitation

3. MONITORING REQUIREMENTS

The applicant will be required to monitor regularly for flow and those parameters limited in Section 2 above with sufficient frequency to ensure compliance with the permit conditions. Frequency, methods of sampling, and reporting dates will be specified in the final permit.

4. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

<i>Submit preliminary engineering report</i>	<i>1 July 1974-</i>
<i>Submit final plans</i>	<i>1 January 1975</i>
<i>Begin construction</i>	<i>1 June 1975</i>
<i>Attain compliance</i>	<i>1 January 1976</i>

5. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Paricide bit

6. WATER QUALITY STANDARDS AND EFFLUENT STANDARDS APPLIED TO THE DISCHARGE

The receiving water, Town Creek, is listed in Class B, which requires a water quality suitable for domestic supply after complete treatment.

The limitations in the permit are based on the best practicable control technology currently available, and will insure that the water quality standards set for Town Creek will not be violated. Town Creek is classified as suitable for domestic use after complete treatment.

7. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Environmental Protection Agency proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Interested persons are invited to submit written comments on the permit application or on EPA's proposed determinations to the following address:

~~PERMIT~~ **WATER ENFORCEMENT**

~~Permit~~ Branch
Environmental Protection Agency
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

All comments received prior to will be considered in the formulation of final determinations with regard to this application.

b. Public Hearing

The Regional Administrator may hold a public hearing if there is a significant degree of public interest in a proposed permit or group of permits. Public notice of such a hearing will be circulated in newspapers in the geographical area of the discharge and to those on the EPA mailing list at least thirty days prior to the hearing.

Following the public hearing, the Regional Administrator may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue or deny the permit. Notice of issuance or denial will be circulated to those who participated in the hearing and to appropriate persons on the EPA mailing list.

If the permit is issued, it will become effective 30 days following date of issuance and will be the final action of EPA unless an adjudicatory hearing is granted.

c. Adjudicatory Hearings

Any person may submit, prior to the expiration of the comment period specified above, or, if a public hearing is held, within 20 days of the date of the notice of issuance or denial of the permit, a request for an adjudicatory hearing to consider the proposed permit and its conditions. If the request is granted, any person may submit a request to be a party to such a hearing within 30 days of public notice of the hearing.

Requests for an adjudicatory hearing and requests to be a party to such a hearing shall:

1. State the name and address of the person making such request;
2. Identify the interest of the requester, and any person represented by issuance or nonissuance of the permit;
3. Identify any other persons whom the requester represents;
4. Include an agreement by the requester, and any person represented by the requester, to be subject to examination and cross-examination, and in the case of a corporation, to make any employee available for examination and cross-examination at his own expense, upon the request of the presiding officer, on his own motion or on the motion of any party.

In addition, any request for an adjudicatory hearing shall state with particularity the reasons for the request, the issues proposed to be considered at the hearing, and the position of the requester on the issues to be considered.

Final issuance of the permit following an adjudicatory hearing will be in accordance with 40 CFR 125.34(c).

d. Issuance of the Permit when no Hearings are Held

If no public hearing or adjudicatory hearing is held, and, after review of the comments received, EPA's determinations are substantially unchanged, the permit will issue and become effective immediately. This will be the final action of the Environmental Protection Agency.

If no hearings are held, but there have been substantial changes, public notice of EPA's revised determinations will be made. Following a 30-day comment period, the permit will issue and become effective immediately and will be the final action of EPA, unless a public or adjudicatory hearing is granted.

Permit No.

SC 0000 141

Application No. SC 024-DVN-2-000036

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Sangamo Electric Co.,

is authorized to discharge from a facility located at

*Pickens
Pickens County
South Carolina*

to receiving waters named

Lower Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth
in Parts I, II, and III hereof.

This permit shall become effective on *date of receipt by permittee.*

This permit and the authorization to discharge shall expire at midnight,

Signed this day of

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning *effective date* and lasting through *31 December 1975* the permittee is authorized to discharge from outfall(s) serial number(s) *001*

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	<i>daily</i>	<i>Continuous Recorder</i>
<i>Oil + Grease</i>	<i>175.5 (431)</i>	<i>223.6 (493)</i>			<i>2/week</i>	<i>grab</i>
<i>BOD₅</i>	<i>32.2 (72)</i>	<i>37.2 (82)</i>			<i>2/week</i>	<i>24 hr. composite</i>
<i>TSS</i>	<i>136.4 (433)</i> <i>not to exceed</i>	<i>225.0 (496)</i>			<i>2/week</i>	<i>24 hr. composite</i>
<i>phenols</i>	<i>0 to 1</i>	<i>0 to 1</i>			<i>2/week</i>	<i>24 hr. composite</i>

The pH shall not be less than *3.4* standard units nor greater than *9.0* standard units and shall be monitored *daily by continuous recorder*.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
at or near the outfall on the downstream side.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning January 1976 and lasting through expiration date
the permittee is authorized to discharge from outfall(s) serial number(s) 001

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	<u>daily</u>	<u>Continuous recorder</u>
<u>Oil & Grease</u>	<u>46.5 (102.5)</u>	<u>69.7 (153.7)</u>			<u>2/week</u>	<u>grab</u>
<u>BOD₅</u>	<u>22.7 (72)</u>	<u>37.2 (82)</u>			<u>2/week</u>	<u>24 hr. composite</u>
<u>TSS</u>	<u>46.5 (102.5)</u>	<u>69.7 (153.7)</u>			<u>2/week</u>	<u>24 hr. composite</u>
<u>phenols</u>	<u>non detectable</u>	<u>0.0</u>			<u>2/week</u>	<u>24 hr. composite</u>

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at or near the outfall on the downstream side.

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Submit preliminary engineering report

1 July 1974

Submit final plans

1 January 1975

Begin construction

1 June 1975

Attain compliance

1 January 1976

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

C. MONITORING AND REPORTING

1. *Representative Sampling*

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. *Reporting*

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on 28 July 1974. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

3. *Definitions*

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

4. *Test Procedures*

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required.

5. *Recording of Results*

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;

- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

6. *Additional Monitoring by Permittee*

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

7. *Records Retention*

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State water pollution control agency.

A. MANAGEMENT REQUIREMENTS**1. *Change in Discharge***

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. *Noncompliance Notification*

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. *Facilities Operation*

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. *Adverse Impact*

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. *Bypassing*

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass.

PART II

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6. *Removed Substances*

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. *Power Failures*

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

- b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. *Right of Entry*

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. *Transfer of Ownership or Control*

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency.

3. *Availability of Reports*

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public

PART II

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inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

4. *Permit Modification*

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. *Toxic Pollutants*

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. *Civil and Criminal Liability*

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. *Oil and Hazardous Substance Liability*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. *State Laws*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

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9. *Property Rights*

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. *Severability*

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

OTHER REQUIREMENTS

Pertinier

U.S. Environmental Protection Agency
 Region IV, Permit Branch
 1421 Peachtree Street, N.E.
 Atlanta, Georgia 30309
 404/526-5201

in conjunction with

The South Carolina Dept. of Health and Environmental Control
 2500 Bull Street
 Columbia, South Carolina 29211
 803/758-5483

Public Notice No.

NOTICE OF APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AND NOTICE OF PROPOSED STATE CERTIFICATION Sangamo Electric Company, Capacitor Division, Pickens Plant, P. O. Box 128, Pickens, South Carolina 29671, application number SC-074-OYN-2-000036, has made application to discharge waste into Town Creek. Applicant is engaged in the manufacture of capacitors and electrolytes. The one discharge described in the application enters Town Creek approximately 61 meters (200 feet) upstream of the Highway 23 bridge.

On the basis of preliminary staff review and application of 86 Stat. 816, 33 U.S.C. 1251 et seq. (1972), 38 Fed. Reg. 13527 et seq. and other lawful standards and regulations, the U.S. Environmental Protection Agency (EPA) proposes to issue a permit to discharge subject to specific pollutant limitations and special conditions. These proposed determinations are tentative.

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPA address above, no later than

All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit application number should be placed on the envelope next to the above address and also at the top of the first page of comments. A public hearing may be held where the EPA Regional Administrator finds a significant degree of public interest in a proposed permit or group of permits.

A fact sheet containing additional details about the application and the proposed determinations, a sketch showing the exact location of the discharge, and additional information on hearing procedure is available by writing or calling EPA. A copy of the draft permit is also available from EPA. The application, comments received, and other information are available for review and copying at Room 309, 1421 Peachtree Street, Atlanta, Georgia, between the hours of 8:15 a.m. and 4:30 p.m., Monday through Friday. A copying machine is available for public use at a charge of 20¢ per page. Information is also available from the S.C.D.H.E.C. office in Columbia.

The South Carolina Dept. of Health and Environmental Control has proposed to certify the discharge in accordance with the provisions of Section 401 of the Federal Water Pollution Control Act, as amended (P.L. 92-500). Persons wishing to comment upon or object to state certification are invited to submit same in writing to the state agency address above no later than . If a public hearing is held, as described above, the state agency will co-chair the hearing in order to receive comments relative to state certification.

Please bring the foregoing to the attention of persons who you know will be interested in this matter.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

FACT SHEET

APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
TO U.S. WATERS

Application No. SC-074-OYN-2-000036

Date _____

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Sangamo Electric Company
P. O. Box 128
Pickens, South Carolina 29671

b. Description of Applicant's Operation

Manufacture of capacitors and electrolytes

c. Production Capacity of Facility

150,000 pieces/day

d. Applicant's Receiving Waters

Town Creek

For a sketch showing the location of the discharge(s), see
Attachment A.

e. Description of Existing Pollution Abatement Facilities

Wastewater flows through trap into neutralization chamber for
pH correction, then to lagoon with 5-day retention time and
mechanical aeration.

f. Description of Discharges (as reported by applicant)

Serial 001 -

Average Flow - 1,229,000 gallons/day

pH Range (std. units) - 3.4 - 9.0

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>	
	<u>in kg/day (lbs/day)</u>	
	<u>Daily</u>	<u>Daily</u>
	<u>Average</u>	<u>Maximum</u>
Oil and Grease	195.5 (431)	223.6 (493)
BOD ₅	32.7 (72)	37.2 (82)
TSS	196.4 (433)	225.0 (496)

2. PROPOSED EFFLUENT LIMITATIONS

Serial 001 -

Permitted pH Range (std. units) - 6.0 - 9.0

Effluent Characteristic

Discharge Limitation

in kg/day (lbs/day)

Daily Daily
Average Maximum

Oil and Grease

46.5 (102.5) 69.7 (153.7)

BOD₅

32.7 (72) 37.2 (82)

TSS

46.5 (102.5) 69.7 (153.7)

Phenols

Non-Detectable

3. MONITORING REQUIREMENTS

The applicant will be required to monitor regularly for flow and those parameters limited in Section 2 above with sufficient frequency to ensure compliance with the permit conditions. Frequency, methods of sampling, and reporting dates will be specified in the final permit.

4. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

Submit Preliminary Engineering Report	July 1, 1974
Submit Final Plans	January 1, 1975
Begin Construction	June 1, 1975
Attain Compliances	January 1, 1976

5. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Any pesticide discharge from any point source shall comply with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.) and the use of such pesticide shall be in manner consistent with its labeling.

6. WATER QUALITY STANDARDS AND EFFLUENT STANDARDS APPLIED TO THE DISCHARGE

The limitations in the permit are based on the best practicable technology currently available, and will insure that the water quality standards set for Town Creek will not be violated. Town Creek is classified as suitable for domestic use after complete treatment.

7. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Environmental Protection Agency proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Interested persons are invited to submit written comments on the permit application or on EPA's proposed determinations to the following address:

Water Enforcement Branch
Environmental Protection Agency
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

All comments received prior to will be considered in the formulation of final determinations with regard to this application.

b. Public Hearing

The Regional Administrator may hold a public hearing if there is a significant degree of public interest in a proposed permit or group of permits. Public notice of such a hearing will be circulated in newspapers in the geographical area of the discharge and to those on the EPA mailing list at least thirty days prior to the hearing.

Following the public hearing, the Regional Administrator may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue or deny the permit. Notice of issuance or denial will be circulated to those who participated in the hearing and to appropriate persons on the EPA mailing list.

If the permit is issued, it will become effective 30 days following date of issuance and will be the final action of EPA unless an adjudicatory hearing is granted.

c. Adjudicatory Hearings

Any person may submit, prior to the expiration of the comment period specified above, or, if a public hearing is held, within 20 days of the date of the notice of issuance or denial of the permit, a request for an adjudicatory hearing to consider the proposed permit and its conditions. If the request is granted, any person may submit a request to be a party to such a hearing within 30 days of public notice of the hearing.

Requests for an adjudicatory hearing and requests to be a party to such a hearing shall:

1. State the name and address of the person making such request;
2. Identify the interest of the requester, and any person represented by issuance or nonissuance of the permit;
3. Identify any other persons whom the requester represents;
4. Include an agreement by the requester, and any person represented by the requester, to be subject to examination and cross-examination, and in the case of a corporation, to make any employee available for examination and cross-examination at his own expense, upon the request of the presiding officer, on his own motion or on the motion of any party.

In addition, any request for an adjudicatory hearing shall state with particularity the reasons for the request, the issues proposed to be considered at the hearing, and the position of the requester on the issues to be considered.

Final issuance of the permit following an adjudicatory hearing will be in accordance with 40 CFR 125.34(c).

d. Issuance of the Permit when no Hearings are Held

If no public hearing or adjudicatory hearing is held, and, after review of the comments received, EPA's determinations are substantially unchanged, the permit will issue and become effective immediately. This will be the final action of the Environmental Protection Agency.

If no hearings are held, but there have been substantial changes, public notice of EPA's revised determinations will be made. Following a 30-day comment period, the permit will issue and become effective immediately and will be the final action of EPA, unless a public or adjudicatory hearing is granted.

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Sangamo Electric Company

is authorized to discharge from a facility located at

Pickens, Pickens County, South Carolina

to receiving waters named

Town Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth
in Parts I, II, and III hereof.

This permit shall become effective on date of receipt by permittee.

This permit and the authorization to discharge shall expire at midnight,

Signed this day of

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through December 31, 1975, the permittee is authorized to discharge from outfall(s) serial number(s) 001.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
Oil and Grease	195.5 (431)	223.6 (493)	—	—	2/month	Grab
BOD ₅	32.7 (72)	37.2 (82)	—	—	3/month	24 hr. composite
TSS	196.4 (433)	225.0 (496)	—	—	2/month	24 hr. composite
Phenols	Non-Detectable		—	—	1/quarter	24 hr. composite

The pH shall not be less than 3.4 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
At or near the outfall on the downstream side.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning January 1, 1976 and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 001.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
Oil and Grease	46.5 (102.5)	69.7 (153.7)	—	—	2/week	Grab
BOD ₅	32.7 (72)	37.2 (82)	—	—	2/month	24 hr. composite
TSS	46.5 (102.5)	69.7 (153.7)	—	—	2/month	24 hr. composite
Phenols	Non-Detectable		—	—	1/quarter	24 hr. composite

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
At or near the outfall on the downstream side.

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Permit No. SC 0000141

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Submit Preliminary Engineering Report	July 1, 1974
Submit Final Plans	January 1, 1975
Begin Construction	June 1, 1975
Attain compliances	January 1, 1976

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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Permit No. SC 0000141

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on July 28, 1974. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

U.S. Environmental Protection Agency
Region IV, Water Enforcement Branch
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

South Carolina Department of
Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29211

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;

d. The analytical techniques or methods used; and

e. The results of all required analyses.

6. *Additional Monitoring by Permittee*

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

7. *Records Retention*

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State water pollution control agency.

A. MANAGEMENT REQUIREMENTS**1. *Change in Discharge***

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. *Noncompliance Notification*

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. *Facilities Operation*

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. *Adverse Impact*

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. *Bypassing*

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass.

6. *Removed Substances*

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. *Power Failures*

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

- b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. *Right of Entry*

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. *Transfer of Ownership or Control*

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency.

3. *Availability of Reports*

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public

PART II

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inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

4. *Permit Modification*

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. *Toxic Pollutants*

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. *Civil and Criminal Liability*

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. *Oil and Hazardous Substance Liability*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. *State Laws*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

OTHER REQUIREMENTS

Any pesticide discharge from any point source shall comply with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.) and the use of such pesticide shall be in manner consistent with its labeling.

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SPECIAL CONDITIONS FOR REFUSE ACT PERMIT

DRAFT

Date 22 Jan. 1974

SC 074 04N 2 000036

SANGAMU ELECTRIC PICKENS

P.O. Box 128 PICKENS S.C. 29671

PERMIT DURATION: 5yr.

RECEIVING WATER: *Town Creek*

APPLICATION DATED: 21 June 1971

PRODUCTION LEVEL: 150,000 pieces/day

MONITORING REPORTING DATES:

EFFLUENT LIMITS & MONITORING:

After the date of issuance of this permit, the effluent characteristics shall not exceed the values listed below:

[illegible]

SPECIAL CONDITIONS FOR REFUSE ACT PERMIT

DRAFT

Date 22 Jan. 1974

SC 674 OYH 2 000036

SANGAMU ELLIOT PICKENS

P.O. Box 128 PICKENS, S.C. 29671

IMPLEMENTATION SCHEDULE:

1. Submit by:

Demonstrate achievement of following effluent limits by:

- OR 2. Comply with the following dates to meet the following list of effluent limits:

- a. Completion of preliminary plans 1 July 1974
b. Final plans 1 January 1975
c. Financing arrangements _____
d. Acquisition of site _____
e. Contract awarded _____
f. Commencement of construction 1 June 1975
g. Operational level attained 1 January 1976

[illegible]

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Permit No. SC 0000141

Application No. SC-074-OYN-2-000036

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Sangamo Electric Company

SUPERSEDED

is authorized to discharge from a facility located at

Pickens, Pickens County, South Carolina

to receiving waters named

Town Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth
in Parts I, II, and III hereof.

This permit shall become effective on date of receipt by permittee.

This permit and the authorization to discharge shall expire at midnight,

Signed this day of

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Permit No. SC 0000141

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Submit Preliminary Engineering Report	July 1, 1974
Submit Final Plans	January 1, 1975
Begin Construction	June 1, 1975
Attain compliances	January 1, 1976

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning January 1, 1976 and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 001.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
Oil and Grease	46.5 (102.5)	69.7 (153.7)	—	—	2/week	Grab
BOD ₅	32.7 (72)	37.2 (82)	—	—	2/month	24 hr. composite
TSS	46.5 (102.5)	69.7 (153.7)	—	—	2/month	24 hr. composite
Phenols	Non-Detectable		—	—	1/quarter	24 hr. composite

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
At or near the outfall on the downstream side.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through December 31, 1975, the permittee is authorized to discharge from outfall(s) serial number(s) 001.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Daily	Continuous Recorder
Oil and Grease	195.5 (431)	223.6 (493)	—	—	2/month	Grab
BOD ₅	32.7 (72)	37.2 (82)	—	—	3/month	24 hr. composite
TSS	196.4 (433)	225.0 (496)	—	—	2/month	24 hr. composite
Phenols	Non-Detectable		—	—	1/quarter	24 hr. composite

The pH shall not be less than 3.4 standard units nor greater than 9.0 standard units and shall be monitored daily by continuous recorder.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
At or near the outfall on the downstream side.

C. MONITORING AND REPORTING

1. *Representative Sampling*

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. *Reporting*

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on July 28, 1974. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

U.S. Environmental Protection Agency
Region IV, Water Enforcement Branch
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

South Carolina Department of
Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29211

3. *Definitions*

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

4. *Test Procedures*

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required.

5. *Recording of Results*

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;

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- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

6. *Additional Monitoring by Permittee*

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

7. *Records Retention*

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State water pollution control agency.

A. MANAGEMENT REQUIREMENTS**1. *Change in Discharge***

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. *Noncompliance Notification*

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. *Facilities Operation*

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. *Adverse Impact*

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. *Bypassing*

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass.

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6. *Removed Substances*

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. *Power Failures*

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

- b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. *Right of Entry*

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. *Transfer of Ownership or Control*

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency.

3. *Availability of Reports*

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public

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inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

4. *Permit Modification*

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. *Toxic Pollutants*

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. *Civil and Criminal Liability*

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. *Oil and Hazardous Substance Liability*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. *State Laws*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

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9. *Property Rights*

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. *Severability*

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

OTHER REQUIREMENTS

Any pesticide discharge from any point source shall comply with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.) and the use of such pesticide shall be in manner consistent with its labeling.

35

Ex 35
Lank

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



PHONE: 803-878-6311
TWX: 810-397-2498
TELEX: 57-0441

March 21, 1974

Mr. John Lank
U. S. Environmental Protection Agency
Region IV
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Re: Sangamo Electric Company
SC 074 OYN 2 000036

Dear Sir:

This will acknowledge receipt of Mr. George L. Harlow's letter of March 7, 1974 transmitting the draft Permit notice for the NPDES permit. It should be noted that Mr. Harlow's letter did not arrive at our plant until March 18 and requests our comments by March 26.

We request that the deadline for our comments be extended to April 23. The reason for requesting the extension is that the draft Permit gives us until January 1, 1976 to cut our discharge of Oil and Grease and TSS by approximately 75%. We have no idea of what is involved to accomplish this - it could be as simple as adding particular items of equipment to our existing water treatment facility or as complex as tearing it out and building a complete new facility.

We will engage the services of the engineering firm of Davis and Floyd of Greenwood, South Carolina to analyze our present plant and tell us what we must do to meet the requirements of the permit. Although a firm date has not been established for the first meeting, the four week extension requested should be adequate to determine the feasibility of compliance by January 1, 1976,

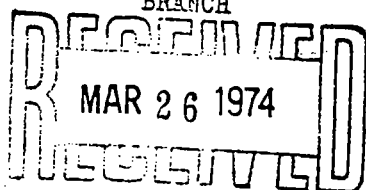
We appreciate your consideration in this matter.

Very truly yours,

SANGAMO ELECTRIC COMPANY

H. Robert Asmus
Industrial Relations Manager

WATER ENFORCEMENT
BRANCH



HRA:dr

EPA-REGION IV

cc: Mr. Charles Jeter

36

JUL 24 1974

4AKW:WED

Mr. Butch Snyger
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29211

Dear Butch:

Re: Sangano Electric, Pickens
SC 074 OYS 2 000036

Due to an administrative error somewhere in the processing of the revised information from the referenced plant, we neglected to send you a copy of the revised permit. I am enclosing an up-to-date draft of the permit, along with the work sheet.

Regarding the matter of your copies of the public notice and fact sheet (I believe you get eighteen copies), I have ~~checked~~ checked with the people who handle that, and they have had a misunderstanding which resulted in failure to send these out. They will get these in the mail today.

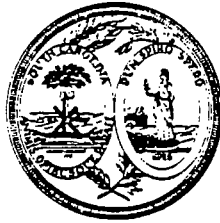
If you have any other problems, just give me a call.

Sincerely,

Mike Donahoe
Chemical Engineer

REDonahoe:daj:rm 307:3971:7/23/74

37



BOARD MEMBERS

Lachlan L. Hyatt, Chairman
 William M. Wilson, Vice-Chairman
 I. DeQuincey Newman, Secretary
 W. A. Barnette, Jr.
 Caroline G. Newhall
 C. M. Shiver, Jr.
 J. Howard Stokes, M.D.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

E. KENNETH AYCOCK, M.D., M.P.H., COMMISSIONER
 J. MARION SIMS BUILDING — 2600 BULL STREET
 COLUMBIA, SOUTH CAROLINA 29201

September 4, 1974

RECEIVED
 EPA/REGION IV
 SEP 9 10 33 AM '74
 ENFORCEMENT
 DIVISION

Mr. Paul J. Traina
 Director, Enforcement Division
 U.S. Environmental Protection Agency
 1421 Peachtree St., N.E.
 Atlanta, Georgia 30309

Re: State Certification
 Sangamo Electric Company - SC0000141
 Capacitor Division
 Pickens Plant

Dear Mr. Traina:

Pursuant to Section 401 of the Federal Water Pollution Control Act (33 U.S.C. 1251, 1341; hereafter the "Act"), the State of South Carolina issues this Certification for the above referenced industry as an applicant for National Pollutant Discharge Elimination System (NPDES) permit to discharge into navigable waters.

Having evaluated the applicant's application and having participated in the development of conditions to be imposed in the NPDES permit, the State of South Carolina certifies that if the applicant complies with the conditions developed for the NPDES permit, the applicant's discharge will comply with the applicable provision of Section 301 of the Act and appropriate requirements of State Law. Furthermore, in so far as it can determine, the State of South Carolina certifies that those limitations under Section 302 and standards under Section 306 and 307 which are applicable to the applicant's discharge have been so applied. It is noted that all certification is dependent on proper easements obtained by the applicant.

Certification is contingent on the following requirements.

It is the position of the State of South Carolina that certain daily maximum concentrations should be added to the Permit. These additions would in no way overrule the poundage limits already established in the Permit. We submit the following additions:

A letter to Mr. Traina.

Page 2

September 4, 1974

Sangamo Electric Company - SC0000141 - Capacitor Division - Pickens Plant

Discharge 001 (Page 2 and 3 of 14)

	Other Units	
	Daily Avg.	Daily Max.
BOD ₅		60 mg/l
Cyanide		.1 mg/l
Aluminum		1.5 mg/l
Copper		1.5 mg/l
Nickel		1.5 mg/l

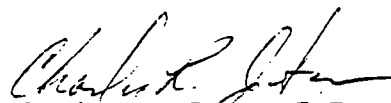
Discharge 002 (Page 4 and 5 of 14)

	Other Units	
	Daily Avg.	Daily Max.
BOD ₅		20 mg/l
Aluminum		1.5 mg/l

Discharge 003 (Page 6 and 7 of 14)

	Other Units	
	Daily Avg.	Daily Max.
BOD ₅		20 mg/l
Aluminum		1.5 mg/l

Sincerely,



Charles R. Jeter, P.E., Director
Industrial & Agricultural Wastewater
Engineering Division
Bureau of Wastewater & Stream Quality Control

CRJ/CWS:jk

38



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 303094AEW:WED

SEP 30 1974

Mr. J. C. Hydrick
Vice President
Sangamo Electric
Post Office Box 3347
Springfield, Illinois 62708

Re: Pickens Plant
SC 074 OYN 2 000036

Dear Mr. Hydrick:

The National Pollutant Discharge Elimination System permit issued to the above referenced facility has been found to contain an error on page 9 of 14. A corrected copy of this page is enclosed herewith, and you are hereby authorized to discard page 9 of 14 of the present permit and substitute the enclosed page for it.

Sincerely,

for John C. White
Jack E. Ravan
Regional Administrator

Enclosure

cc: Mr. Charles Jeter
South Carolina Department of Health
and Environmental Control

C. MONITORING AND REPORTING**1. Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on March 28, 1975. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

Environmental Protection Agency
Water Enforcement Branch
1421 Peachtree Street, N.E.
Atlanta, Georgia

South Carolina Dept. of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29211

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;

39

FIP

Davis & Floyd Engineers, Inc.

CONSULTING ENGINEERS

POST OFFICE DRAWER 428

GREENWOOD, SOUTH CAROLINA 29646

EMMETT I. DAVIS, P. E.
PHIL R. FLOYD, P. E.T. LESLIE HUGHSTON, P. E.
WILLIAM J. DAY, P. C.

October 30, 1974

RLP-93-74

Mr. John C. Lank, Jr.
U. S. Environmental Protection Agency
Region IV
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

RE: Sangamo Electric Company
NPDES Permit No. SC 0000J41

Dear Mr. Lank:

Please find enclosed a copy of the preliminary engineering report for Sangamo Electric Company, as called for on page 8 of the NPDES Permit. This report gives the details of changes that are proposed which will enable the discharges to meet the Permit limits.

As you will see, it is proposed that the total number of discharges be reduced from three (3) to one (1), with the water from discharges No. 002 and 003 being rerouted to the treatment facility.

If there is a need for changes in the NPDES Permit or Permit Application, please advise.

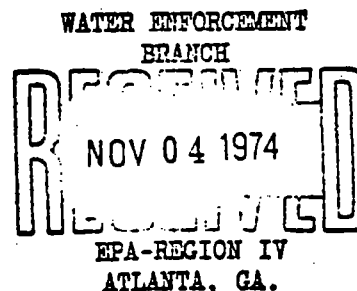
Very truly yours,

DAVIS & FLOYD ENGINEERS, INC.

R. L. Powell
R. L. Powell

RLP:jsp
J#2003-1

enclosure - Preliminary Engineering Report

cc: Charles Jeter
SCDHEC

**PRELIMINARY ENGINEERING REPORT
WASTEWATER TREATMENT FACILITY MODIFICATIONS
SANGAMO ELECTRIC COMPANY
PICKENS, SOUTH CAROLINA**

**PRELIMINARY ENGINEERING REPORT
WASTEWATER TREATMENT FACILITY MODIFICATIONS
SANGAMO ELECTRIC COMPANY
PICKENS, SOUTH CAROLINA**

JOB NO. 2003-1

OCTOBER, 1974

**DAVIS & FLOYD ENGINEERS, INC.
CONSULTING ENGINEERS
REYNOLDS STREET EXTENSION
GREENWOOD, SOUTH CAROLINA**

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I. INTRODUCTION

A. Purpose. This Engineering Report is prepared for the purpose of presenting the design criteria for modifications and additions to the wastewater treatment facilities at Sangamo Electric Company, in Pickens, South Carolina. These modifications and additions are considered necessary in order for the facility to meet the conditions specified in NPDES Permit No. SC 0000141.

This report fulfills the first requirement of the Schedule of Compliance outlined in the above referenced permit (page 8 of 14).

B. Background. Sangamo Electric Company is located on Highway 190 in Pickens, South Carolina. The principle products manufactured at this location are capacitors (mica, paper, plastic, and aluminum electrolytic).

The plant was constructed in three phases. The initial plant was constructed in 1955, with major additions occurring in 1956 and 1961. The majority of the chemical waste resulting from the manufacturing operation is treated in a wastewater treatment facility constructed in 1968. There are also two (2) discharges from the plant (cooling water and chemical waste) which do not flow into the treatment facility. All sanitary waste is disposed of in septic tanks.

II. DISCUSSION

A. Comprehensive Description of Proposed Project. There are three existing wastewater discharges from the Sangamo Electric Company plant site. These discharges are shown on Figure 1. Discharges No. 002 and 003 receive no treatment. Discharge No. 001 is the effluent from the existing wastewater treatment facility and accounts for approximately 90% of the total wastewater flow from the plant site.

1. Existing Wastewater Treatment Facility. The present wastewater treatment facility, as shown in Figure 2, is located south of the manufacturing plant. The facility was constructed in 1968 to treat an average flow of 1.4 million gallons per day.

The facility consists of the following:

a. One pH Neutralization Basin. This concrete mix basin has a capacity of 9,050 gallons and provides a detention time of approximately 9.3 minutes at the design flow of 1,400,000 gallons per day. The basin is equipped with one (1) three horsepower Lightnin Mixer. The pH is adjusted by caustic addition using Milton-Roy chemical metering pumps.

b. One Equalization Basin. This basin has a capacity of approximately 2,608,000 gallons and provides a detention time of approximately 1.9 days at the design flows. The equalization basin is equipped with an oil skimmer.

DISCHARGE
NO. 002

TO SEPTIC TANK

TO SEPTIC TANK

DISCHARGE NO.003

1961

1956

1955

TO SEPTIC
TANK

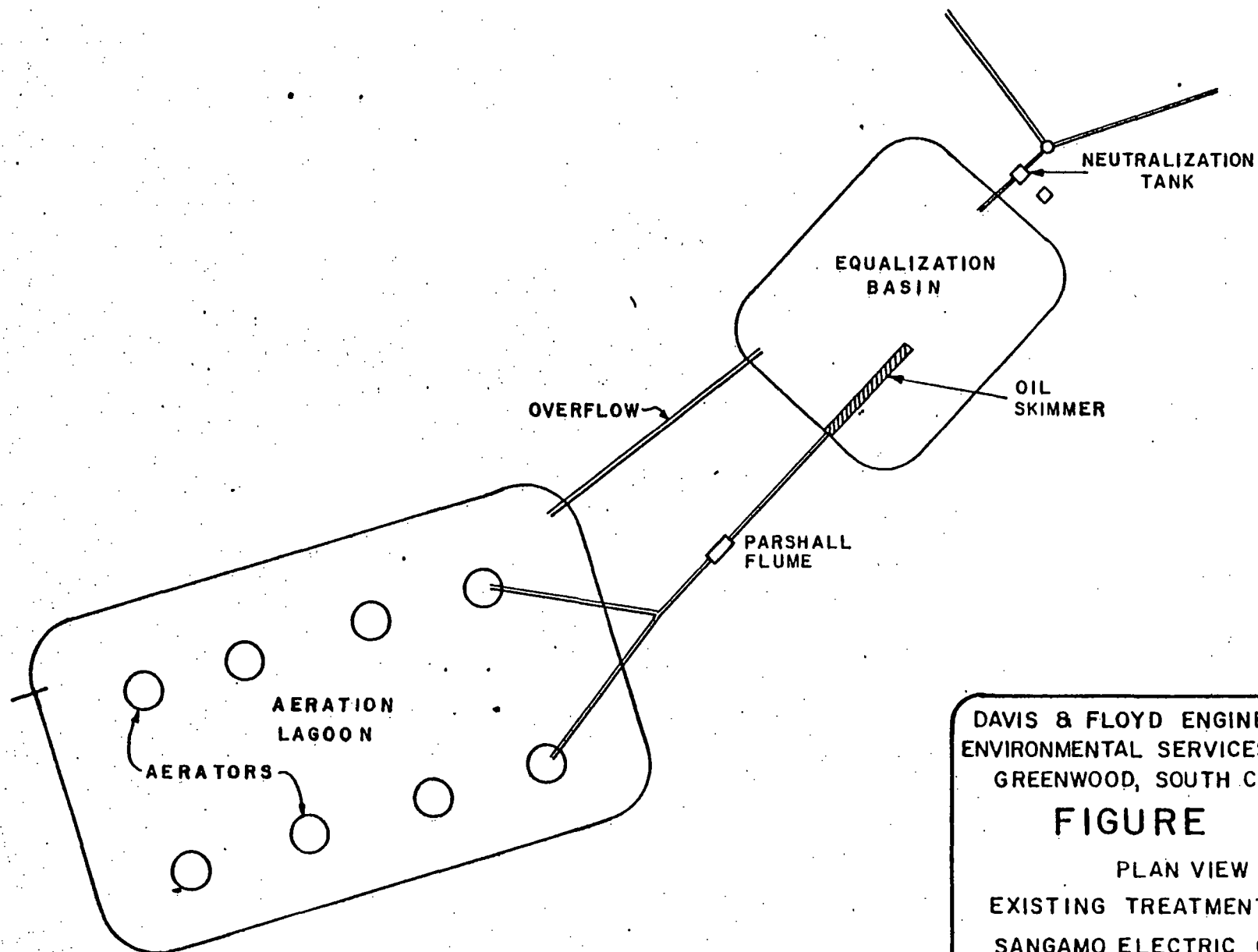
TO TREATMENT FACILITY
DISCHARGE NO. 001

DAVIS & FLOYD ENGINEERS INC.
ENVIRONMENTAL SERVICES DIVISION
GREENWOOD, SOUTH CAROLINA

FIGURE 1

DISCHARGE POINT
LOCATIONS

SANGAMO ELECTRIC COMPANY



DAVIS & FLOYD ENGINEERS INC.
ENVIRONMENTAL SERVICES DIVISION
GREENWOOD, SOUTH CAROLINA

FIGURE 2

PLAN VIEW
EXISTING TREATMENT FACILITY
SANGAMO ELECTRIC COMPANY

c. One Aeration Basin. This basin has a capacity of approximately 8,980,000 gallons with a detention time of 6.4 days. The basin is equipped with eight (8) twenty-five horsepower floating Aqualator Aerators, manufactured by the Welles Corporation.

Normal operation for this facility is for most of the wastewater from the manufacturing plant to flow into the mixing basin. In this basin the pH is adjusted by caustic addition.

The wastewater flows from the mixing basin into an equalization basin. The purpose of the equalization basin is to provide an equalized flow to the aeration basin over a seven day period. This is done using an automatically operated valve receiving its signal from a Parshall Flume. The basin is also used for removing aluminum oxide. The aluminum oxide is allowed to settle into the bottom of the pond and is manually removed periodically. The equalization basin is equipped with an oil skimmer to remove floating oil.

The wastewater flows from the equalization basin into the aeration basin for biological degradation. The flow leaves the equalization basin via two routes. One is through the effluent structure into a Parshall Flume. The other is through an overflow pipe. Both discharge into the aeration basin. Discharge from the aeration basin is under a baffle into an overflow pipe.

In addition to the process wastewater most of the storm water from the manufacturing plant site is discharged into the treatment plant.

2. Proposed Additions and Modifications. The proposed additions and modifications will consist of a few operational changes within the treatment facility, as well as some major piping changes in the sewer system. The sewer additions and changes are shown in Figure 3, with the treatment facility modifications shown in Figure 4.

One of the major changes in the sewer system will be to remove all storm water drains from the system. This will eliminate the existing condition of shock hydraulic loads being placed on the treatment facility during heavy rains. The storm water will be rerouted via a new storm water drainage system.

All of the water now being treated in the wastewater treatment facility will continue to be treated. In addition, the water now being discharged via Discharges No. 002 and 003, will be rerouted to the treatment facility as shown on Figure 3. Thus, all dry weather flow from the plant site will be treated in the wastewater treatment facility.

Additions and modifications to the wastewater treatment plant will include the addition of an oil trap on the influent line to the facility. The trap will provide a detention time of approximately 15 minutes and will be designed to remove floating, as well as settleable, oil.

DISCHARGE
NO. 002

TO SEPTIC TANK

TO SEPTIC TANK

DISCHARGE NO. 003

LEGEND

— EXISTING
- - - PROPOSED

ROOF DRAINS
IN NEW PIPE

CATCH BASIN

NOTE:

CATCH BASINS WILL BE
REDESIGNED SO THAT
RAIN WATER AND CHEMICAL
WASTE WILL NOT MIX.

1961

1956

1955

ROOF DRAINS
IN NEW PIPE

STORM WATER DISCHARGE

TO SEPTIC
TANK

ROOF DRAINS
IN NEW PIPE

CATCH BASIN

CATCH BASIN

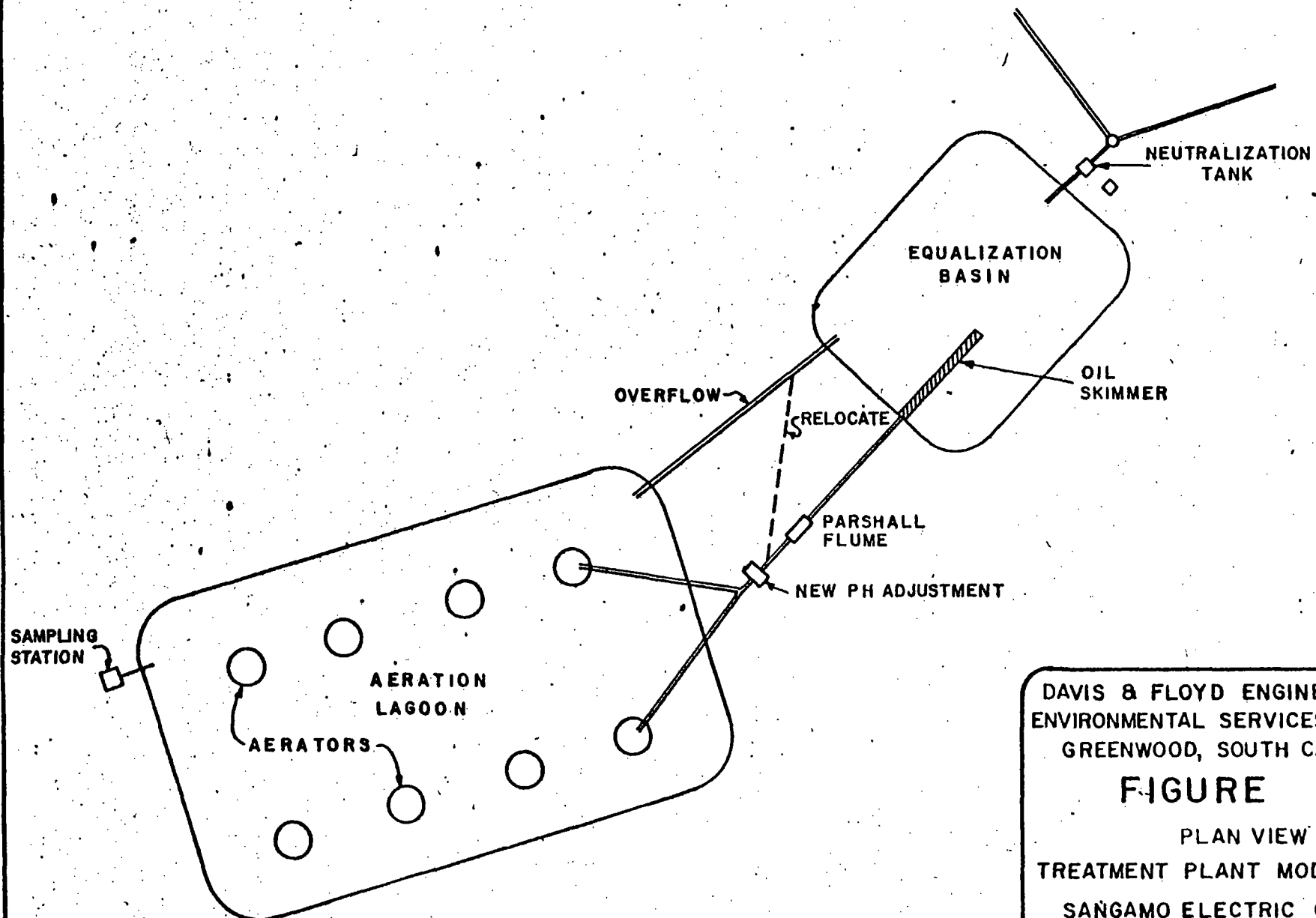
TO TREATMENT FACILITY
DISCHARGE NO. 001

DAVIS & FLOYD ENGINEERS INC.
ENVIRONMENTAL SERVICES DIVISION
GREENWOOD, SOUTH CAROLINA

FIGURE 3

SEWER SYSTEM
MODIFICATIONS

SANGAMO ELECTRIC COMPANY



DAVIS & FLOYD ENGINEERS INC.
ENVIRONMENTAL SERVICES DIVISION
GREENWOOD, SOUTH CAROLINA

FIGURE 4

PLAN VIEW
TREATMENT PLANT MODIFICATIONS
SANGAMO ELECTRIC COMPANY

A new pH adjustment system will be installed between the equalization basin and the aerated lagoon as shown in Figure 4. The system will be equipped with chemical metering pumps that will be automatically controlled, receiving its signal from a pH controller which will be monitoring the pH of a new flash mixing chamber. The flash mixing chamber will have a detention time of approximately 10 minutes.

Various inplant process and piping changes are being made to eliminate the discharge of polychlorinated biphenyls (PCB's). Also, an extensive house-keeping program is being instituted to eliminate PCB contamination.

In addition to the above changes that are being made to improve the quality of the effluent from Sangamo Electric Company, a sampling station is being installed to monitor the water quality of Discharge No. 001. This station will consist of an automatic refrigerated sampler for obtaining composite samples; a continuous pH recorder; and a continuous flow recorder to record flow measured in a new Parshall Flume.

B. Description of Waste. There presently exist three discharges from the plant site. Discharge No. 001 is the discharge from the wastewater treatment facility and consists of a blend of treated chemical waste and cooling water associated with the manufacture of capacitors. Discharge No. 002 is a blend of untreated chemical waste and cooling water. Discharge No. 003 consists mainly of

cooling water, with a small amount of waste from the R & D lab. These streams can be described as follows:

Discharge No. 001

Average Daily Flow 1,575,000 Gallons

Discharge No. 002

Average Daily Flow 138,000 Gallons

Discharge No. 003

Average Daily Flow 17,000 Gallons

However, with the institution of the previously mentioned changes, Discharges No. 002 and 003 will be eliminated and these waste streams will be routed to the treatment facility. Thus, Discharge No. 001, the only remaining discharge, can be described as follows:

Discharge No. 001

Average Daily Flow 1,730,000 Gallons

C. Characteristics of Waste. The manufacture of capacitors is classified under Standard Industrial Code Number 3679. The manufacture of capacitors involves various forming and etching operations on aluminum foil. These operations produce a waste with relatively high solids content and low pH. The raw wastes from the process can

be characterized as follows:

1. Flow:

- | | |
|---|---------------|
| a) Average | 1,730,000 GPD |
| b) Minimum | 300,000 GPD |
| c) Maximum (estimated instantaneous peak) | 2,500,000 GPD |

2. Solids: (average values)

- | | | |
|---------------|---|---|
| a) Settleable | - | 0.2 ml/l |
| b) Suspended | - | 98 mg/l |
| c) Dissolved | - | 360 mg/l |
| d) Floating | - | There is a small amount of floating oils. |

3. Strength of Waste:

- | | | |
|---------------------|---|-----------------|
| a) BOD ₅ | - | 50 mg/l |
| b) COD | - | 70 mg/l |
| c) IDOD | - | Not significant |

4. Color: 50 APHA Units

5. pH: 3.5 - 10 pH Units

6. Alkalinity: 25 mg/l

7. BOD:N:P ratio is 50:1:0.2

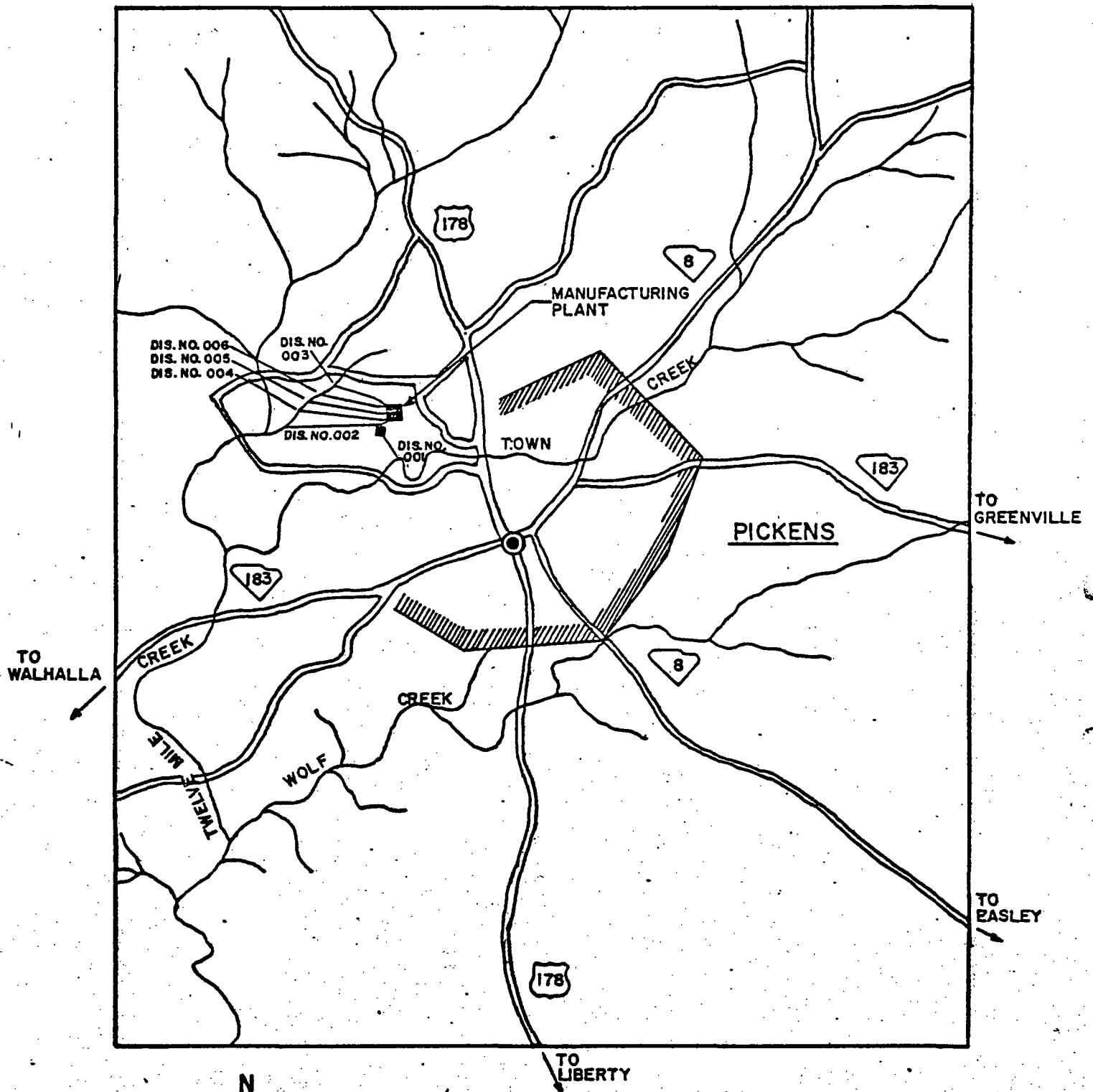
D. Treatability of Waste. The treatability of the waste has been proven in the six years of operation of the facility. During this time, the average BOD₅ reduction has been better than 90%.

E. Location of Subject Area and Point of Discharge. The Sangamo Electric Company is located in Pickens County, South Carolina, on Highway 190 (Sangamo Road). A location map is included in Appendix I. The existing point of discharge from the wastewater treatment facility (Discharge No. 001) can be approximated as follows:

Latitude: 34 degrees 53 minutes 35 seconds

Longitude: 82 degrees 43 minutes 20 seconds

APPENDIX I
LOCATION MAP



"LOCATION MAP"

FROM GENERAL HIGHWAY MAP
PICKENS COUNTY, S.C. 1957

SANGAMO ELECTRIC COMPANY
PICKENS COUNTY, S.C.
APRIL 23, 1974 PAGE 1 OF 1

APPENDIX II

APPLICATION FOR PERMIT TO CONSTRUCT

40

Ex 40

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS. SOUTH CAROLINA 29671. U.S.A.

CAPACITOR DIVISION



PHONE: 803-878-6311
TWX: 810-397-2496
TELEX: 57-0441

February 17, 1976

Environmental Protection Agency
Water Enforcement Branch
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

RE: NPDES Permit No. SC0000141

Dear Sir:

This notice of compliance is submitted per the requirement of Part 1-B Paragraph 2 of NPDES Permit No. SC0000141.

We were in compliance with the Discharge Limitations placed on our effluent NPDES Permit No. SC0000141 prior to January 1, 1976.

I apologize for the late submission of this notice and thank your Ms. Connie Christianson for the reminder.

Truly yours,

SANGAMO ELECTRIC COMPANY

Jessie L. Butner
Mfg. Ser. Mgr.

JLB/lwp

CC: Mr. Robert Cochran - Sangamo Electric
Mr. Jack Janssen - Sangamo Electric

WATER ENFORCEMENT
BRANCH

RECEIVED
FEB 19 1976
EPA-REGION IV
ATLANTA, GA.

41

ENFORCEMENT DIVISION

4AEV:CPC

APR 18 1975

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. J. C. Hydrick
 Vice President
 Sangano Electric Company
 Post Office Box 3347
 Springfield, Illinois 62708

Re: Notice of Violation
 NPDES Permit No. SC0000141
 Pickens, South Carolina

Dear Mr. Hydrick:

It has come to our attention that Sangano Electric Company, Pickens, South Carolina, is in violation of the above-referenced permit. Specifically, during the period December 1, 1974, through March 1, 1975, your company was in violation on BOD₅, aluminum, pH, and oil and grease. Also, flow was not reported on the discharge monitoring report form. Please report flow on all future reports. Such violations of an NPDES permit are subject to enforcement action pursuant to Section 309 of the Federal Water Pollution Control Act, as amended (15 U.S.C. 1319). Your company must take remedial action to prevent the recurrence of the violations.

While we are not taking enforcement action in this instance, a report of the above violations will be placed in your file. The report will be used in our consideration of the appropriate action to be taken in the event of future violations of the permit.

Sincerely yours,

George L. Harlow
 Chief
 Water Enforcement Branch

cc: Mr. Dave Harist
 South Carolina Department of Health
 and Environmental Control

Mr. Jessie L. Turner
 Sangano Electric Company, Pickens
 cc: Traina
 Harlow
 S & A Athens

CPChristianson:cmj:rm 307:397k:4/18/75

42

THE SANGAMO ELECTRIC COMPANY
PICKENS, S. C.
&
POLYCHLORINATED BIPHENYL

SUBMITTED TO
MR. JOHN C. LANK, JR. P. E.
CHIEF, NC/SC COMPLIANCE GROUP
WATER ENFORCEMENT BRANCH
ENFORCEMENT DIVISION
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV

BY:
JESSIE L. BUTNER
MANUFACTURING SERVICES MANAGER
SANGAMO ELECTRIC COMPANY



JUNE 15, 1976

October 27, 1975

Mr. Mike Clark
District Engineer, Environmental Quality Control
300 Building, Suite 105
Greenville, S. C. 29601

RE: Results of Analysis of Pickens Water Supply

Dear Mr. Clark:

In response to our telephone conversation of this morning, I am sending you copies of the analysis of water samples taken at the Pickens Water Plant and incoming water at Sangamo Electric Company.

This data is being supplied to you by Sangamo as an interested citizen. The data is to be used by you as you deem necessary.

Our testing program will end on October 31, 1975. Copies of the October data will be sent to you.

Truly yours,

SANGAMO ELECTRIC COMPANY



J. L. Butner
Mfg. Services Mgr.

JLB/lwp

Enclosures

CC: Mr. Joel Swangham - Pickens County Health Department
Mr. Robert Cochran - Sangamo Electric
Mr. Harold Simmons - Sangamo Electric



P. O. BOX 4187, 2323 SYCAMORE DR., KNOXVILLE, TENNESSEE 37921 / 615 546-1335

CERTIFICATE OF ANALYSIS

123 A-5760
CITY WATER 6/4/75
FROM RESERVOIR

5 ppb Aroclor 1016
less than 1 ppb Aroclor 1254

124 A-5761
CITY WATER 6/4/75
FINISHED

4 ppb Aroclor 1016
less than 1 ppb Aroclor 1254

125 A-5762
PLANT INLET
CITY WATER 6/4/75

5 ppb Aroclor 1016
less than 1 ppb Aroclor 1254

CITY 148 8-4-75 A-6263 Pickens water Plant - Raw water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

CITY 149 8-6-75 A-6264 Pickens water Plant - Finished water
SANGAM 150 - - - Broken in Shipment Incoming water to Plant

less than 0.5 ppb Aroclor 1016
less than 0.5 ppb Aroclor 1254

CITY 153 8-13-75 A-6266
Pickens water plant - Raw water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

CITY 154 8-13-75 A-6267
Pickens water Plant - Finished water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

SANGAM 155 8-13-75 A-6268
Incoming water to Plant

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

CITY 159 8-20-75 A-6345
Pickens water Plant - Raw water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

CITY 160 8-20-75 A-6346
Pickens water Plant - Finished water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

SANGAM 161 8-20-75 A-6347
Incoming water to plant

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

CITY 165 8-27-75 A-6351
Pickens water Plant - Raw water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

CITY 166 8-27-75 A-6352
Pickens water Plant - Finished water

less than 0.5 μ g/liter Aroclor 1016
less than 0.5 μ g/liter Aroclor 1254

SANGAM 167 8-27-75 A-6353
Incoming water to Plant

less than 0.5 μ g/liter Aroclor 1016



P. O. BOX 4187, 2323 SYCAMORE DR., KNOXVILLE, TENNESSEE 37921 / G15 546-1335

CERTIFICATE OF ANALYSIS

175	9-3-75	A-6463	Pickens water Plant Raw water	less than 1 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
176	9-3-75	A-6464	Pickens water Plant Finished water	less than 1 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
177	9-3-75	A-6465	Saugamo Incoming water to Plant	less than 1 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
180	9-10-75	A-6468	Pickens water Plant Raw water	7 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
181	9-10-75	A-6469	Pickens water Plant Finished water	8 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
182	9-10-75	A-6470	Saugamo Incoming water to Plant	11 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
185	9-17-75	A-6473	Pickens water Plant Raw water	19 ppb Aroclor 1016 2 ppb Aroclor 1254
186	9-17-75	A-6474	Pickens water Plant Finished water	10 ppb Aroclor 1016 1 ppb Aroclor 1254
187	9-17-75	A-6475	Saugamo Incoming water to Plant	4 ppb Aroclor 1016 less than 1 ppb Aroclor 1254

LOCATION			
190	9-24-75	A-6478	Pickens water Plant - Raw water 5 ppb Aroclor 1016 less than 1 ppb Aroclor 1254
191	9-24-75	A-6479	Pickens water Plant - Finished water 11 ppb Aroclor 1016 1 ppb Aroclor 1254
192	9-24-75	A-6480	Saugamo Incoming water to Plant 8 ppb Aroclor 1016 less than 1 ppb Aroclor 1254

APPENDIX A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

4AEW:WMT

05 MAY 1976

Mr. J. C. Hydrick
Vice President
Sangamo Electric Company
Post Office Box 3347
Springfield, Illinois 62708

Re: Sangamo Electric Company
NPDES Permit No. SC0000141

Dear Mr. Hydrick:

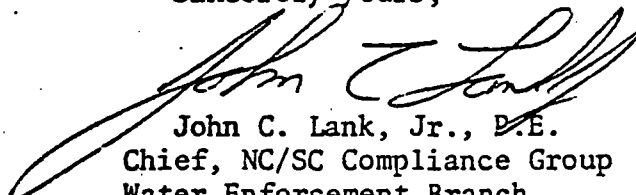
Following a review of the above-referenced file by this office, it has been determined that some additional information is needed from you concerning PCB's at the facility. This Agency requests that you develop analytical data on PCB's in the facility's intake water and also locate and identify areas within the facility where PCB's may enter the discharge stream. This report should describe abatement practices implemented in these identified areas to keep PCB's from entering the discharge.

A representative of the company should be prepared to submit this information to this office on June 15, 1976, at 9:30 a.m. This data will be used to determine what modification of the PCB parameter is necessary.

It has been noted that since the discharges have been combined at this facility, the discharge monitoring reports to this Agency indicate no permit limit for PCB's. When the discharge limitations for each parameter are combined, the PCB's non-detectable limit remained applicable.

If you have any questions concerning this matter, please contact Mr. Marvin Tebeau, SC Compliance Group, at (404) 526-3971.

Sincerely yours,



John C. Lank, Jr., D.E.
Chief, NC/SC Compliance Group
Water Enforcement Branch
Enforcement Division

cc: Mr. Charles Jeter
South Carolina Department of Health
and Environmental Control

APPENDIX B

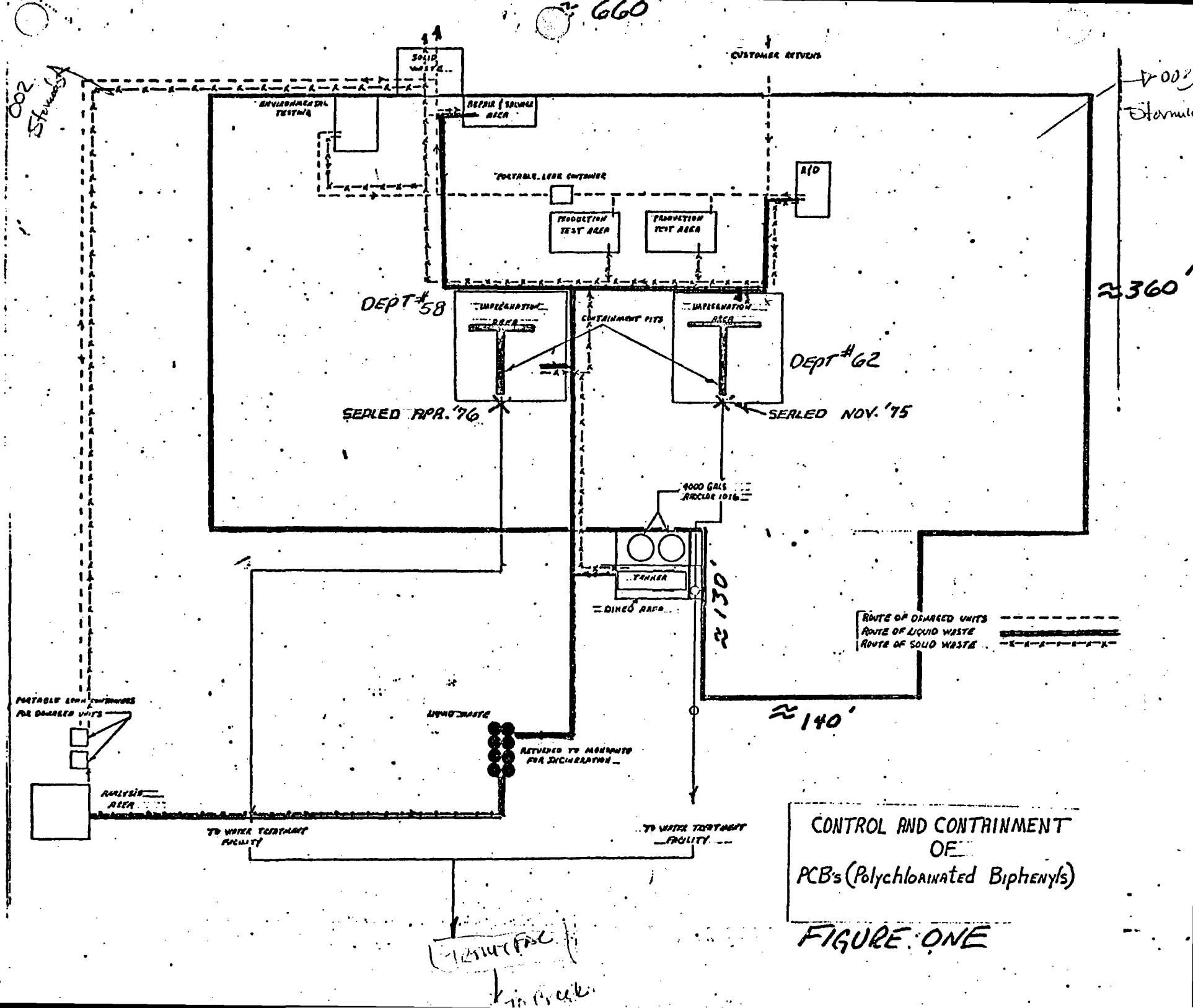
TABLE ONE

PCB CONCENTRATIONS IN THE INTAKE WATER
OF
SANGAMO ELECTRIC COMPANY

<u>DATE TAKEN</u>	<u>PCB CONCENTRATIONS</u>
June 4, 1975	5 ppb
August 13, 1975	Less than 1 ppb
August 20, 1975	Less than 1 ppb
August 27, 1975	Less than 1 ppb
September 3, 1975	Less than 2 ppb
September 10, 1975	<u>11 ppb</u>
September 17, 1975	4 ppb
September 24, 1975	<u>8 ppb</u>
October 22, 1975	<u>14 ppb</u>
October 29, 1975	<u>16 ppb</u>
January 1, 1976	Less than 2 ppb
January 28, 1976	Less than 2 ppb
February 4, 1976	Less than 2 ppb
February 11, 1976	Less than 2 ppb
February 18, 1976	Less than 2 ppb
February 25, 1976	Less than 2 ppb
March 3, 1976	Less than 2 ppb
March 10, 1976	5 ppb
March 17, 1976	Less than 2 ppb
March 24, 1976	1 ppb
March 31, 1976	3 ppb
April 7, 1976	Less than 2 ppb
April 14, 1976	Less than 2 ppb
April 21, 1976	Less than 2 ppb
April 28, 1976	5 ppb
May 5, 1976	Less than 2 ppb
May 12, 1976	Less than 2 ppb
May 19, 1976	Less than 2 ppb
May 26, 1976	Less than 2 ppb

APPENDIX C

APPENDIX D



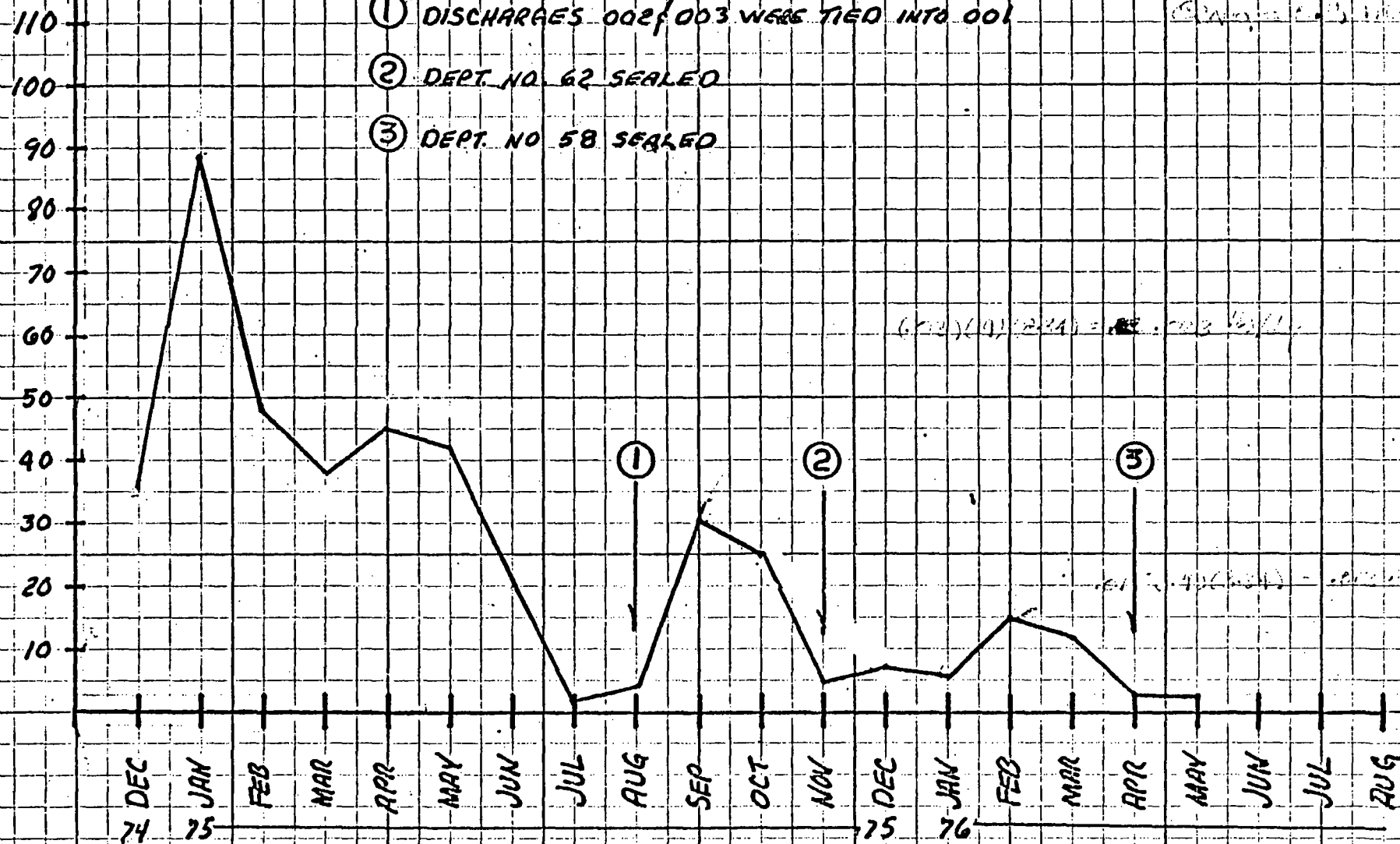
DISCHARGE NO. 001

① DISCHARGES 002 & 003 WERE TIED INTO 001

② DEPT. NO. 62 SEALED

③ DEPT. NO 58 SEALED

EFFLUENT PCB CONCENTRATION (ppb)
MONTHLY AVERAGE



HIGH	56	171	82	105	70	148	22	<3	7	35	31	0	12	14	56	27	5	5
LOW	26	44	22	10	7	<2	16	<1	<1.5	26	7	<2	<2	<2	<2	1	<2	<2

FIGURE TWO

APPENDIX E

SANGAMO ELECTRIC COMPANY

SOUTH CAROLINA BRANCH

MEMORANDUM

Jan. 28, 1976

Ron Duncan

Sent To

Jack Ford

SUBJECT: Procedure for Scrapping Power Capacitors

Power Factor production units or customer returns which are to be scrapped should be disposed of per the following:

- (1) Remove the bushings. Good bushings are to be returned to stock and bad bushings are to be handled as in No. 6 below.
- (2) Drain the 1015 oil. Preferably the unit should drain overnight but 6 hours will be sufficient. The oil is to be put in 55 gallon drums to be sent to Rollins for regeneration.
- (3) Wipe oil off from case surfaces.
- (4) Repair the unit. This is to be done by soldering muffler steel plates over the bushing holes. These 2-5/8" x 2-3/8" plates can be sheared from case panel material.
- (5) Haul the unit to the landfill.
- (6) Sections, resistor boards, saddle sheets, etc. left over from repairing units; oil absorbents used for cleanup in repair or blockhouse areas; broken bushings; and other small contaminated articles should be hauled to the landfill in 55 gallon drums.
- (7) Emptied cans are to be degreased before disposal unless handled as in No. 6 above.
- (8) Returned units should be handled as in 1, 2, 6, and 7 above.

RD/lwp

CC: J. Butler
J. Blank
F. Kelley
B. Jones

J. Macnaman
W. Meaders
B. Whitman

• Rollins Environmental Services is presently used for disposal of PCB contaminated liquid waste.

This report is being made in response to the letter of May 5, 1976 by Mr. John Lank of EPA Region IV to Mr. J. C. Hyndrick of Sangamo Electric Company (See Appendix A).

ANALYTICAL DATA INCOMING WATER

The analytical data on PCB's in the intake water of Sangamo Electric had been developed as early as June 4, 1975. One grab sample was taken at that time. The result of that sample showed 5 ppb of PCB's in the intake water. This result was received from the testing lab ⁽¹⁾ July 11, 1975.

Being concerned by the result of this one sample, a three months sampling program was begun. Samples of incoming water were taken and analyzed for

PCB's during the period of August 13, 1975 through October 29, 1975. The

results of this study appear in Appendix B, Table One. These results

prompted Sangamo to notify the District Engineer on October 27, 1975 of

the apparent PCB contamination of the Pickens water supply. A copy of

the letter and data sent to the District Engineer are included in Appendix C.

After notification of the District Engineer, this test program was ended, but

with increasing pressure being applied to the abatement of PCB's the incoming water sampling program was resumed on January 21, 1976 and continues.

These results are a continuation of the data already referred to in Appendix B.

Table One.

(1) Galbraith Laboratories, Inc.
Knoxville, Tennessee

PCB POINTS OF ENTRY INTO THE DISCHARGE
STREAM AND ABATEMENT PRACTICES IMPLEMENTED

First, let's review Sangamo's past practices for handling of PCB containing materials. Up until 1974 Sangamo produced three product types which used as the impregnating fluids Monsanto's Aroclor 1254 and MCS 1016 (MCS 1016 replaced Aroclor 1242). Beginning in 1974 Sangamo reduced the number of product types to only two. Both of these products use MCS 1016 as the impregnating fluid. The use of Aroclor 1254 was limited to use in vacuum equipment.

With the aid of Figure One, see Appendix D, the areas where PCB's may enter the effluent will be described. The two impregnation areas (center of Figure One) were the major contributors of PCB contamination. In these areas impregnating fluids which dripped from freshly impregnated units onto the floor drained into the areas marked containment pits. Vapors and oils from vacuum equipment are exhausted into these pits. Until November 1975 for Dept. #62 and April 1976 for Dept. #58, the oils and vapors entering these pits were mixed with cooling water from pumps and impregnation tanks and exhausted through the drainage system. Other sources of contamination were the Analysis Area (lower left hand corner of Figure One), the Receiving Area (lower center of Figure One) and drips from solid and liquid waste as they were transported throughout the facility finding their way into the effluent by many modes of transport, dumping of water used for floor scrubbing, materials washed into storm drains and etc. other than the two

impregnating areas and possible spills at the tanker during transfer of material to the Storage Area, the loss of PCB containing materials to the effluent was small, but was brought under control with the same vigor as was the larger contributors.

Sangamo tackled the abatement of PCB's in its discharge stream first by establishing good housekeeping practices followed by complete redesign and modification to the drainage system for the impregnation areas, the storage area, and total rerouting of all cooling waters.

Housekeeping:

- (1) Drums are located throughout the facility for the collection of liquid waste. As drums of liquid waste are collected, they are sealed, cleaned, and transported to the Holding Area (Bottom of Figure One) where they are collected for disposal by incineration. Rollins Environmental Services, Inc. is used for disposal of liquid waste.
- (2) Drums with covers removed are located throughout the facility for the collection of solid waste; capacitor sections, rags, floor dry materials, and etc. These drums are collected as they become filled, replaced with new drums and transported to the Solid Waste Collection Area (top center of Figure One) where they are daily trucked to the County landfill. The contents of the drum and drum are disposed of by landfill.

- (3) Portable leak proof containers are provided for the transport and storage of damaged capacitors. Damaged capacitors (power factor correction) are stored in these containers until proper disposal. See Appendix E for a description of the proper disposal method for power factor correction capacitors.
- (4) All spills throughout the facility are cleaned up immediately and disposed of as solid waste via rags and/or floor dry materials. Where the spill area is scrubbed, the scrub water is disposed of in a liquid waste collection drum.

Engineered Controls:

- (1) The containment pits located within the two impregnation areas have been sealed off with access to the drainage system removed. Cooling water from pumps, impregnation tanks, and degreasing equipment have been rerouted into a cooling tower system. Condensate of vapors, oils from vacuum equipment, spills and scrub water are collected and held within these sealed pits. As required, collected materials within the containment pits are pumped into liquid waste collection drums. These drums are sealed, cleaned, and transported to the liquid waste collection area for proper disposal.

PCB's
in
Cooling
Tower
Blank

- (2) The entire Receiving Area for MCS 1016 has been roofed and diked. The tanker is located within the diked area during times of material transfer. The diked area was constructed of concrete with sufficient volume to retain 4800 gallons of Aroclor should a major spill occur. Minor spills as encountered during normal material transfer are cleaned up and disposed of as solid waste via floor dry materials. The area has no drain and was roofed to exclude rain water.

The results of Sangamo's efforts are bearing fruit as can be seen by referring to Figure Two of Appendix D. Sangamo has shown a steady decline in the concentrations of PCB's in its discharge stream for the past eighteen months. The benefit to be reaped from sealing off Depts. #58 and #62 have not been fully realized. I would estimate that another three months of monitoring will be required before the full impact of sealing these two departments is realized.

In addition to the abatement practices already implemented by Sangamo, Sangamo has obtained the services of an Engineering firm and are working with the South Carolina Department of Health and Environmental Control in search of a solution to a problem caused by the PCB's which are contained in Sangamo's equalization basin of its water treatment facility. It is the opinion of the SCDHEC that these PCB's will continue to contribute to the concentration of

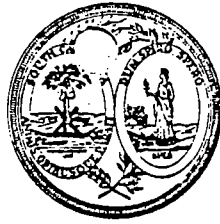
PCB's found in the discharge stream of Sangamo. The preliminary Engineering Study will propose a complete bypass of the basin with the construction of a new basin. It is estimated that this construction will take place in the second quarter of 1977.

Conclusion:

It is realized that the purpose for this report is to allow the EPA Region IV and the SCDHEC to place a limit as to the concentration of PCB's which will be allowed in the discharge stream of Sangamo. I would like to recommend that the setting of a firm limit be postponed for at least two months and preferably three months giving us sufficient time to fully evaluate the effect of sealing off Dept. #58 from the discharge stream.

Unless background levels of PCB's cause some unforeseen problems, Sangamo has done what was necessary to remove PCB's from its discharge stream. Only continued monitoring of the discharge stream will verify the adequacy of the abatement practices implemented.

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BOARD MEMBERS

Ex 43

Lachlan L. Hyatt, Chairman
William M. Wilson, Vice-Chairman
I. DeQuincey Newman, Secretary
W. A. Barnette, Jr.
Leonard W. Douglas, M.D.
J. Lorin Mason, Jr., M.D.
William C. Moore, Jr., D.M.D.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

E. KENNETH AYCOCK, M.D., M.P.H., COMMISSIONER
J. MARION SIMS BUILDING — 2600 BULL STREET
COLUMBIA, SOUTH CAROLINA 29201

August 18, 1976

Mr. B. Thomas Hancher
Davis & Floyd Engineers, Inc.
P.O. Drawer 428
Greenwood, S.C. 29646

Re: Sangamo Electric Company
Pickens County

Dear Mr. Hancher:

The engineering report you submitted for wastewater treatment system modifications at Sangamo Electric Company has been reviewed and is given favorable consideration by this Agency, with the stipulations as outlined below. You are requested to submit four (4) sets of final plans and specifications and two (2) copies of the application for a construction permit (applications enclosed).

Approval for allowing materials to remain in the existing equalization basin is based on the condition that no adverse water quality impact will result from this storage. Sangamo Electric Company and the South Carolina Department of Health and Environmental Control will monitor test wells to be strategically located in close proximity to the equalization basin to determine any adverse groundwater impact directly associated with the storage of PCB - containing materials. A specific monitoring and test program will be detailed in a separate letter. Our geologists will contact you when they plan to visit the site to establish the required monitoring well locations.

As you are aware from our meeting on August 16, 1976, the subject of PCB contamination is particularly sensitive at the present time. It would appear to be in Sangamo Electric Company's interest to expedite construction of the proposed sludge basin and take the existing equalization basin off-line as soon as possible. To prevent construction delays due to equipment lead-time, we hereby authorize the purchase of those items that will be required for the treatment system modifications. We will also expedite issuance of the construction permit as soon as the final plans and specifications are received.

WATER ENFORCEMENT
BRANCH

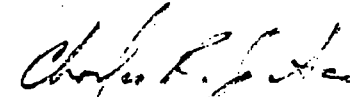
AUG 20 1976

EPA-REGION IV
ATLANTA, GA.

A letter to Mr. Hancher.
Page 2
August 18, 1976

If there are any questions, or if this office may be of assistance, please advise.

Sincerely,



Charles R. Jeter, P.E., Director
Industrial & Agricultural Wastewater Division
Bureau of Wastewater & Stream Quality Control

CRJ/PDD:jk

CC: Max Batavia
Jessie L. Butner
Robert Chochran
Jules Hydrick
✓ John Lank
Dave Heriot
Don Duncan

44

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671. U.S.A.

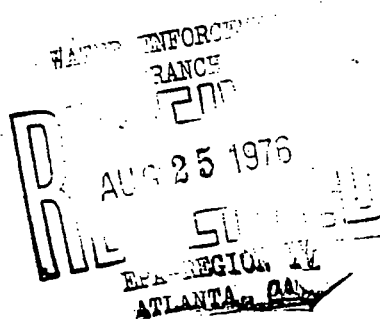
CAPACITOR DIVISION



PHONE: 803-878-6311
TWX: 810-397-2496
TELEX: 57-0441

August 24, 1976

Mr. Charles R. Jeter
South Carolina Department of Health &
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Reference: Your letter of Aug. 18, 1976

Dear Mr. Jeter:

In order to eliminate contamination of rainfall runoff from possible leakage and/or spillage from our drummed PCB contaminated liquid waste storage area, the area has been eliminated. All drums which were in the area on August 16, 1976 have been shipped off for proper disposal. In the future all drums containing PCB contaminated waste will be stored inside the factory in an area provided with containment.

The pipe of unknown origin referenced in your letter has been identified. The pipe drains a sump located in our water meter pit. The killing of the local vegetation was caused by an overflow of our brine making tanks. The overflow from the brine tanks was washed from our roadway with a hose pipe into the water meter pit. The problem of overflow has been corrected by providing the brine tanks with an overflow drain which re-enters the factory and drains into our waste water discharge system.

If there are any additional questions, please contact me.

Truly yours,

SANGAMO CAPACITORS DIVISION

Jessie L. Butner

Jessie L. Butner
Mfg. Service Mgr.

CC: Mr. Robert Cochran - Sangamo Capacitors Division
Mr. Max Satavia - S. C. Dept. of Health & Environmental Control
✓ Mr. John Lank - Environmental Protection Agency

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WATER ENFORCEMENT BRANCH

INVESTIGATION REPORT

DATE OF INVESTIGATION 24 AUGUST 76

NAME OR INDUSTRY OR MUNICIPALITY: SANGAMO ELECTRIC CO

City PICKENS State SC Zip 29671

Persons Participating:

EPA: WAYNE MATHEWS, ATLANTA ENF. DIV. INDUSTRY: MR JULES HYDRICK

STEVE HALL, MARK KOBERG, ATHENS S&D MR JESSE BUTNER

STATE: _____

NOT CONTACTED

STATE CONTACTED: DATE: _____ PERSON: _____ TITLE: _____

REASON FOR INVESTIGATION:

Routine ☐ Permit Violation ☐ Permit ☐ Citizen ☒ Other CONTINUING INVESTIGATION OF PCBs
Limit Schedule Spill ☐ Non-Filer ☐ Complaint in HARTWELL FISH

TYPE OF INDUSTRY: _____ PRODUCTION RATE: _____

TYPE OF WASTE AND FLOW: PCB'S

TYPE OF WASTE TREATMENT: _____

WASTE DISCHARGES TO: TOWN CR, 12-MILE CR, LAKE HARTWELL Interstate - Yes ☒ No ☐
Navigable - Yes ☒ No ☐

DISCUSSION (Use additional sheet if required):

- ① Advised Sangamo of EPA Sampling Program at Sangamo and in receiving stream
- ② Discussed PCB levels in Town Cr Upstream of Sangamo Offfall.

LEGAL ACTION REQUIRED: Yes ☐ No ☐ If yes, what _____
FURTHER ACTION REQUIRED: Yes ☐ No ☐ If yes, what _____ date _____

(Attach supporting info.)

Distribution:

Reported by: WR Mathews

46

EX 46
Wittle
SANGAMO ELECTRIC COMPANY

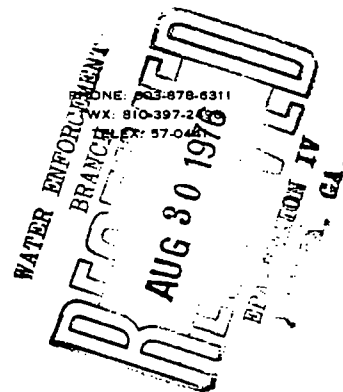
POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



August 25, 1976



South Carolina Department of Health & Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Attention: Mr. Charles R. Jeter

Reference: Progress Report, Wastewater System Improvements

Dear Mr. Jeter:

As agreed to on August 16, 1976, weekly progress reports will be made by Sangamo.

The following schedule has been proposed by our Engineers (Davis and Floyd).

Preliminary layout	Aug. 31, 1976
Contractor budget estimate	Aug. 31, 1976
Relocation of existing utilities	Sept. 10, 1976
Design completion	Sept. 15, 1976
Execution of construction contract	Sept. 30, 1976
Construction complete	Dec. 30, 1976

Soil boring needed to support the preliminary layout was done August 24, 1976.

Please advise if further information is required.

Yours truly,

SANGAMO CAPACITOR DIVISION

Jessie L. Butner

Jessie L. Butner
Mfg. Services Mgr.

cc: Mr. J. C. Hydrick - Sangamo Capacitor Division
Mr. Robert Cochran - " " "
Mr. Max Batavia - S. C. Dept. of Health & Environmental Control
✓ Mr. John Laak - U. S. Environmental Protection Agency
Mr. B. Thomas Hancher - Davis & Floyd Engineers, Inc.

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SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



August 30, 1976

WATER ENFORCEMENT
PHONE: 803-878-6311
TELEX: 57-0441

SEP 01 1976
EPA-REGION IV
ATLANTA, GA.

United States Environmental Protection Agency
Region IV
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Attention: Mr. Paul J. Traina

Dear Mr. Traina:

The purpose of this letter is to advise you that in accordance with the decision reached during the meeting between EPA Region IV, the SCDHEC, and Sangamo on August 26, 1976, the upper or equalization pond of the Sangamo wastewater treatment facility was bypassed at 11:00 A. M. August 27, 1976.

The effect of this on the effluent is unknown and will be determined by regularly scheduled 24 hour composite sampling.

Truly yours,

SANGAMO CAPACITOR DIVISION

Jessie L. Butner
Mfg. Services Mgr.

JLB:dr

cc: Mr. J. C. Hydrick - Sangamo Capacitor Division
Mr. R. E. Cochran - " " "
Mr. L. Smoak - Thompson, Ogletree & Deakins
Mr. B. Day - Davis & Floyd
Mr. T. Hancher - Davis & Floyd
Mr. C. Jeter - SCDHEC

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SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



PHONE: 803-678-6311
TWX: 810-397-2496
TELEX: 57-0441

September 2, 1976

U. S. Environmental Protection Agency
Region IV
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Attention: Mr. Paul J. Traina, Director EPA Enforcement

RE: Meeting between EPA Region IV, SCDHEC and Sangamo Capacitor
Division on August 26, 1976

Dear Mr. Traina:

The purpose of this letter is to comply with the request for data pertaining to the possible clean up and disposal of trash from three dumps identified by EPA Region IV as the Twelve Mile Creek Dump, the Nix Dump, and the Breazeale Dump, and to determine the volume of sludge in our equalization basin and in a 1972 disposal site across the highway from the basin.

I. Trash & Earth to be Disposed of from Dumps:

(a) Twelve Mile Creek Dump

Trash 1269 yds.³
Earth 4944 yds.³

WATER ENVIRONMENT

(b) Nix Dump

Trash 10,509 yds.³
Earth 4334 yds.³

SEP 8 1976

(c) Breazeale Dump

Trash 888 yds.³
Earth 1106 yds.³

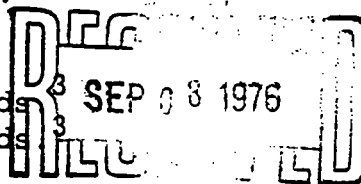
EPA-REGION IV
ATLANTA, GA..

II. Sludge Generated by Manufacturing Process:

- (a) Sludge presently in equalization basin 370 yds.³
- (b) Sludge in 1972 disposal site across highway
from basin 170 yds.³

III. Disposal of Waste from Dumps and Equalization Basin

RECEIVED
SEP 7 12 22 PM '76
EPA REGION IV
DIVISION



Mr. Paul J. Traina
Page 2
September 2, 1976

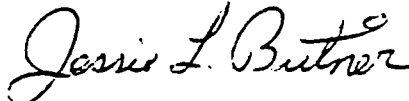
We were notified by State officials on August 31, 1976 that the two public landfill sites considered for possible disposal of the waste from the dumps and basin would not be approved. Borings on Sangamo property indicated that soil conditions were good and warranted additional study. The Engineering Firm of Davis & Floyd of Greenwood, S. C. was contacted on August 31, 1976 and asked to conduct the necessary tests and prepare all reports necessary for obtaining a permit to construct a hazardous waste disposal site on Sangamo property. The following tentative schedule has been devised for planning purposes only. Actual construction of the disposal site and disposal of waste from the dumps and equalization basin is contingent upon the results of the engineering studies presently being conducted.

Begin Engineering Phase	Sept. 10, 1976
Land Survey Complete	Sept. 30, 1976
Geological Study Complete	Sept. 30, 1976
Engineering Report Complete	Oct. 15, 1976
Report & Application Approval by SCDHEC . .	Oct. 15, 1976
Construction Contract Awarded	Oct. 30, 1976
Disposal Site Completed & Dumps Moved . .	Dec. 30, 1976

EPA Region IV also requested that we supply them with a quadrangle map marked up indicating all areas used by Sangamo for waste disposal and indicating the sampling point used by Sangamo to monitor Town Creek.

Truly yours,

SANGAMO ELECTRIC COMPANY



Jessie L. Butner
Mfg. Services Mgr.

Enclosure

JLB/lwp

cc: Mr. J. Hydrick - Sangamo Capacitor Division
Mr. T. Hancher - Davis & Floyd
Mr. H. G. Edwards - SCDHEC
Mr. L. Smoak - Thompson, Ogletree & Deakins

49

SEP 13 1976

Mr. J. Hydrick
Sangamo Electric Company
P. O. Box 123
Pickens, South Carolina 29571

Dear Mr. Hydrick:

This letter is in response to your letter of September 2, 1976 concerning the PCB contaminated wastes from your plant at Pickens, South Carolina. The proposed schedule for moving the wastes quantified in your letter is reasonable.

Because the South Carolina Department of Health and Environmental Control is the regulatory agency for Solid Waste in South Carolina, we will recommend that this schedule be accepted and formalized by the State.

Our recommendation to the State for the disposal of PCB contaminated waste is as stated in the Federal Register, Vol. 41, No. 64, Thursday, April 1, 1976 (a copy of which is enclosed). Therefore, we recommend that you prepare to dispose of your daily PCB contaminated waste by one of these methods immediately.

We reviewed some preliminary groundwater data collected and analyzed by the State and we concur in the assessment that further groundwater investigation in the vicinity of your plant is needed. The State and EPA are cooperatively planning to do more groundwater monitoring and sample the deep wells which we understand exist on your property. You should contact Mr. W. E. Stillwall, Jr., Chief, Bureau of Special Environmental Programs, 2600 Bull Street, Columbia, South Carolina for more detailed information on the planned approach and support needed from Sangamo (such as sampling pumps for the deep wells, etc.).

Our data indicates that the sludge from both the upper and lower settling basins will have to be disposed of as recommended above and in accordance with your schedule. All settling basins used in the future should be lined to prevent hydraulic continuity with the groundwater. It appears that there will be a continuing need for chemical waste landfill.

It is likely that you will need to further treat any PCB contaminated liquid waste stream (washing machines presently connected to septic tank hose).

The State will permit the disposal site; however, we request that a copy of the application and all data be sent to Mr. James H. Scarbrough, Chief, Residuals Management Branch, Environmental Protection Agency, 1421 Peachtree Street, NE, Atlanta, Georgia 30309.

Sincerely,

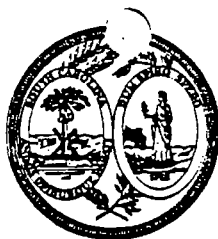
Original Signed By

Paul J. Traina
Director
Enforcement Division

cc: W. E. Stillwell, Jr.
H. Gerald Edwards
James H. Scarbrough
John Jenkins
Larry Johnson

bcc: Jim Finger
George Harlow
Gary Hutchinson
Joe Franzmathes

50



Lachlan L. Hyatt, Chairman
 William M. Wilson, Vice-Chairman
 I. DeQuincey Newman, Secretary
 W. A. Barnette, Jr.
 Leonard W. Douglas, M.D.
 J. Lorin Mason, Jr., M.D.
 William C. Moore, Jr., D.M.D.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

E. KENNETH AYCOCK, M.D., M.P.H., COMMISSIONER
 J. MARION SIMS BUILDING — 2600 BULL STREET
 COLUMBIA, SOUTH CAROLINA 29201

MEMORANDUM

TO: John E. Jenkins, Deputy Commissioner
 Environmental Quality Control Office

FROM: William E. Stilwell, Chief *William E. Stilwell*
 Bureau of Special Environmental Programs

Charles R. Jeter, Director *Charles R. Jeter*
 Industrial & Agricultural Wastewater Division

SUBJECT: Sangamo Electric Company, Pickens, S.C., PCB Meeting

DATE: September 17, 1976

On September 16, 1976, a meeting was held at Sangamo to go over the status of past and present control efforts and future engineering considerations to remove PCB's from their wastewater discharge. The company had requested this particular meeting.

Those attending the meeting are as follows:

Sangamo Electric
 Mr. Hydrick and Mr. Butner

Davis & Floyd Consulting Engineers
 Mr. Day and Mr. Hancher

Mr. Lewis Smoak - Attorney

South Carolina Department of Health and Environmental Control
 Mr. Stilwell, Mr. Jeter, Mr. Goodman, and Mr. Johnson

The following are the major results of this meeting:

1. Internal process plant piping controls were reviewed to insure that no PCB's are coming from the process area into the waste treatment plant.
2. Permanent piping for the bypass of the upper lagoon of the waste treatment facility has been completed. This will eliminate any turbulence in the lower lagoon that may have occurred due to the trenched bypass.

September 17, 1976

3. Construction crews are working on a new equalization lagoon to replace the bypassed first lagoon.
4. To insure that no PCB's come from residual contamination in the lower lagoon, Sangamo is looking at engineering alternatives to isolate any PCB's in this lower lagoon so that they will not be discharged from the lagoon with the treated wastewater.
5. Data made available to DHEC personnel at this meeting indicated that the PCB's in the discharge for this month of September range from 2.7 to 17.6 parts per billion. These analyses were done by two private laboratories. EPA and the State were sampling the discharge. These samples will be run by five laboratories to check on quality control.
6. Work is continuing on the evaluation of an approvable solid waste hazardous material disposal area. Specifics as to what to do with materials in the existing "dumps" was discussed. In particular, how to handle contaminated soil in these "dumps" is to be evaluated.
7. Both the upper and lower lagoon are being evaluated for any leachate that may result in surface or ground water contamination. Also, we discussed an approach to monitor deep wells in the area.
8. We will install test wells around the septic tanks to check for any ground water contamination.

It appears that the company is making a good faith effort to control the problem.

CRJ/jk

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Analytical Services Division
Chemical and Physical Analyses of Drinking Water

Date Collected 8 / 26 / 76 Time Collected 3:15 p.m. Station Code _____
Mo. Day Yr. Laboratory Sample No. R08276269
County Pickens By D. Duncan

MAIL REPORTS TO:

SAMPLING POINT:

Name D. Duncan
Address Water Supply Div.

Well (D.H.E.C. #1) on
dike of lower lagoon,
Sangamo, Pickens

TYPE OF EXAMINATION

COMMENTS

- ☐ Private Routine
☐ Public Complete
☐ Special (Please Specify Request)

Cl⁻, Nd

RESULTS
(Lab Use Only)

INORGANIC ANALYSES

Total Solids _____ ppm

Turbidity _____ t.u.

Color _____ c.u.

pH _____

Alkalinity _____ ppm

Fluoride _____ ppm

Chloride 390 ppm

Nitrate (N)
(Total NO₃/NO₂) _____ ppm

MBAS _____ ppm

Sulfate _____ ppm

Hardness _____ ppm

Calcium _____ ppm

Magnesium _____ ppm

Sodium 300 ppm

Potassium _____ ppm

Arsenic _____ ppm

Barium _____ ppm

Cadmium _____ ppm

Chromium _____ ppm

Copper _____ ppm

Iron _____ ppm

Lead _____ ppm

Manganese _____ ppm

Mercury _____ ppb

Selenium _____ ppm

Silver _____ ppm

Zinc _____ ppm

ORGANIC ANALYSES

Aldrin _____ ppm

Chlordane _____ ppm

DDT _____ ppm

Dieldrin _____ ppm

Endrin _____ ppm

Heptachlor _____ ppm

Heptachlor
Epoxide _____ ppm

Lindane _____ ppm

Methoxychlor _____ ppm

Toxaphene _____ ppm

Parathion _____ ppm

2,4-D _____ ppm

2,4,5-T _____ ppm

2,4,5-TP _____ ppm

CCE _____ ppm

TOC _____ ppm

Date Reported 09 / 08 / 76

Released

By Curush

Date Collected 8 / 26 / 76
Mo. Day Yr.Time Collected 3:30 p.m.Station Code _____
Laboratory _____
Sample No. R08274270County PickensCollected By D. Duncan

MAIL REPORTS TO:

SAMPLING POINT:

Name D. DuncanAddress Water Supply Div.Drainage ditch on upper
lagoon dike (E. end) after
light shower, Sangamo

TYPE OF EXAMINATION

COMMENTS

- ☐ Private Routine
- ☐ Public Complete
- ☐ Special (Please Specify Request)

PCB's, Cl⁻, Na

RESULTS

(Lab Use Only)

INORGANIC ANALYSES

Total Solids _____ ppm

Turbidity _____ t.u.

Color _____ c.u.

pH _____

Alkalinity _____ ppm

Fluoride _____ ppm

Chloride 21 ppmNitrate (N)
(Total NO₃/NO₂) _____ ppm

MBAS _____ ppm

Sulfate _____ ppm

Hardness _____ ppm

Calcium _____ ppm

Magnesium _____ ppm

Sodium 21 ppm

Potassium _____ ppm

Arsenic _____ ppm

Barium _____ ppm

Cadmium _____ ppm

Chromium _____ ppm

Copper _____ ppm

Iron _____ ppm

Lead _____ ppm

Manganese _____ ppm

Mercury _____ ppb

Selenium _____ ppm

Silver _____ ppm

Zinc _____ ppm

ORGANIC ANALYSES

Aldrin _____ ppm

Chlordane _____ ppm

DDT _____ ppm

Dieldrin _____ ppm

Endrin _____ ppm

Heptachlor _____ ppm

Heptachlor
Epoxide _____ ppm

Lindane _____ ppm

Methoxychlor _____ ppm

Toxaphene _____ ppm

Parathion _____ ppm

2,4-D _____ ppm

2,4,5-T _____ ppm

2,4,5-TP _____ ppm

CCE _____ ppm

TOC _____ ppm

Inodor 12/12 and/or 10/16 = 158.0 ppbInodor 10/54 = 24.0 ppbTotal PCB's = 182.0 ppbDate Reported 09 / 08 / 76

Released

By _____

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Analytical Services Division

Chemical and Physical Analyses of Drinking Water

Date Collected 8/26/76
Mo. Day Yr.Time Collected 2:00pmStation Code _____
Laboratory _____
Sample No. R08296267County PickensCollected By D. Duncan

MAIL REPORTS TO:

SAMPLING POINT:

Name D. DuncanAddress Water Supply Div.French drain at toe of
upper lagoon dike, Sengston
Pickens

TYPE OF EXAMINATION

COMMENTS

☐ Private Routine☐ Public Complete☒ Special (Please Specify Request)PCB's, Cl, Na

RESULTS

(Lab Use Only)

INORGANIC ANALYSES

ORGANIC ANALYSES

Total Solids _____ ppm Sodium 300 ppm

Aldrin _____ ppm

Turbidity _____ t.u. Potassium _____ ppm

Chlordane _____ ppm

Color _____ c.u. Arsenic _____ ppm

DDT _____ ppm

pH _____ Barium _____ ppm

Dieldrin _____ ppm

Alkalinity _____ ppm Cadmium _____ ppm

Endrin _____ ppm

Fluoride _____ ppm Chromium _____ ppm

Heptachlor _____ ppm

Chloride 420 ppm Copper _____ ppm

Heptachlor Epoxide _____ ppm

Nitrate (N) _____ ppm
(Total NO₃/NO₂) _____ ppm

Lindane _____ ppm

MBAS _____ ppm Lead _____ ppm

Methoxychlor _____ ppm

Sulfate _____ ppm Manganese _____ ppm

Toxaphene _____ ppm

Hardness _____ ppm Mercury _____ ppb

Parathion _____ ppm

Calcium _____ ppm Selenium _____ ppm

2,4-D _____ ppm

Magnesium _____ ppm Silver _____ ppm

2,4,5-T _____ ppm

Zinc _____ ppm

2,4,5-TP _____ ppm

Analog 1242 and/or 1016 = 25.0 ppbAnalog 1254 = 3.0 ppbTotal PCB's = 28.0 ppb

CCE _____ ppm

TOC _____ ppm

Date Reported 09/08/76

Released

By C. Duncan

BF&AS:50

White-Addressee; Canary-File; Pink-District Office; Goldenrod-Sanitarian (Private Only)

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Analytical Services Division

Chemical and Physical Analyses of Drinking Water

Date
Collected 8 / 26 / 76
Mo. Day Yr.Time
Collected 2:30 p.m.Station Code _____
Laboratory _____
Sample No. R08276.268County PickensCollected
By D. Duncan

MAIL REPORTS TO:

SAMPLING POINT:

Name D. DuncanAddress Water Supply Div.Spring on hillside by
upper lagoon dike,
Sangamo, Pickens

TYPE OF EXAMINATION

COMMENTS

- ☐ Private Routine
- ☐ Public Complete
- ☐ Special (Please Specify Request)

PCB's, Cl, NaRESULTS
(Lab Use Only)

INORGANIC ANALYSES

Total Solids _____ ppm

Turbidity _____ t.u.

Color _____ c.u.

pH _____

Alkalinity _____ ppm

Fluoride _____ ppm

Chloride 410 ppm

Nitrate (N)
(Total NO₃/NO₂) _____ ppm

MBAS _____ ppm

Sulfate _____ ppm

Hardness _____ ppm

Calcium _____ ppm

Magnesium _____ ppm

Sodium 300 ppm

Potassium _____ ppm

Arsenic _____ ppm

Barium _____ ppm

Cadmium _____ ppm

Chromium _____ ppm

Copper _____ ppm

Iron _____ ppm

Lead _____ ppm

Manganese _____ ppm

Mercury _____ ppb

Selenium _____ ppm

Silver _____ ppm

Zinc _____ ppm

ORGANIC ANALYSES

Aldrin _____ ppm

Chlordane _____ ppm

DDT _____ ppm

Dieldrin _____ ppm

Endrin _____ ppm

Heptachlor _____ ppm

Heptachlor Epoxide _____ ppm

Lindane _____ ppm

Methoxychlor _____ ppm

Toxaphene _____ ppm

Parathion _____ ppm

2,4-D _____ ppm

2,4,5-T _____ ppm

2,4,5-TP _____ ppm

CCE _____ ppm

TOC _____ ppm

Aroclor 1242 and/or 1016 = 23.4 ppb

Aroclor 1254 = 1.4 ppb

Total PCB's = 24.8 ppb

Date Reported 09 / 07 / 76

Released

By W. Bush

BF&AS:50

White-Addressee; Canary-File; Pink-District Office; Goldenrod-Sanitarian(Private Only)

51

WATER ENFORCEMENT BRANCH

INVESTIGATION REPORT

DATE OF INVESTIGATION 20 Sept. 1976NAME OR INDUSTRY OR MUNICIPALITY: Saugameo Electric CompanyCity PICKENS State SC Zip 29671

Persons Participating:

EPA: MR WAYNE MATHEW INDUSTRY: MR JESSE BUTLERSTATE: NONESTATE CONTACTED: DATE: NONE PERSON: _____ TITLE: _____

REASON FOR INVESTIGATION:

Routine	Permit Violation	Permit	Citizen	Other
	Limit Schedule Spill	Non-Filer	Complaint	<u>CONTINUING PCB INVESTIGATION</u>

TYPE OF INDUSTRY: CAPACITOR MANUFACTURE PRODUCTION RATE: _____TYPE OF WASTE AND FLOW: 1 MGD MIXED IND. WASTETYPE OF WASTE TREATMENT: NEUTRALIZATION, SEDIMENTATIONWASTE DISCHARGES TO: TRUNK, RUN CK, LK HORTON Interstate - Yes ☒ No ☐
Navigable - Yes ☒ No ☐

DISCUSSION (Use additional sheet if required):

Reviewed Most Recent Corrective Measures to Eliminate PCB's in Ind. Wastewater:
1st Pond is Bypassed, Bypass has been modified to permit full use of PH Control
Apparatus again. A leak in the plugged line from PCB Area 62 has been located and repaired.
Sewer lines from both Area 62 and Area 58 have now been plugged with Concrete.
This now appears to have effectively isolated all PCB handling from the
IWTP. More Monitoring of IWTP influent will ascertain how effective this is.
(over)

LEGAL ACTION REQUIRED: Yes ☐ No ☒ If yes, what
FURTHER ACTION REQUIRED: Yes ☒ No ☐ If yes, what Continue Monitoring date 9-20-76
IWTP Influent and Effluent

(Attach supporting info.)

Distribution:

Reported by: Wayne Mathew

Analyses of 3 split samples collected by EPA at
Athens Lab, Stewart Lab and Galbraith Lab show that
Stewart and Galbraith agree fairly closely with values about
 $\frac{1}{2}$ those obtained by Athens. This introduces some
question about Athens' results of analyses which ought to be
addressed.

52

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS. SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION

PHONE: 803-878-6311
TWX: 810-397-2496
TELEX: 57-0441

September 13, 1976

Director, Enforcement Division
U. S. Environmental Protection Agency
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

RE: Administrative Order No. AO-76-111 (W)

Dear Sir:

The data requested by the referenced administrative order paragraph 3 page 3 is enclosed. Manhole A is the sampling point for wastewater prior to entering the wastewater treatment facility.

Truly yours,

SANGAMO CAPACITOR DIVISION

Jessie L. Butner
Mfg. Services Mgr.

JLB/lwp

Enclosures

cc: Deputy Commissioner Environmental Quality Control - SCDHEC
Mr. Lewis Smoak - Thompson, Ogletree & Deakins
Mr. J. C. Hydrick - Sangamo Capacitor Division
Mr. R. Cochran - " " "

RECEIVED
SEP 15 1976
U.S. ENVIRONMENTAL PROTECTION AGENCY
ATLANTA, GEORGIA

9-10-76
J. BUTNER

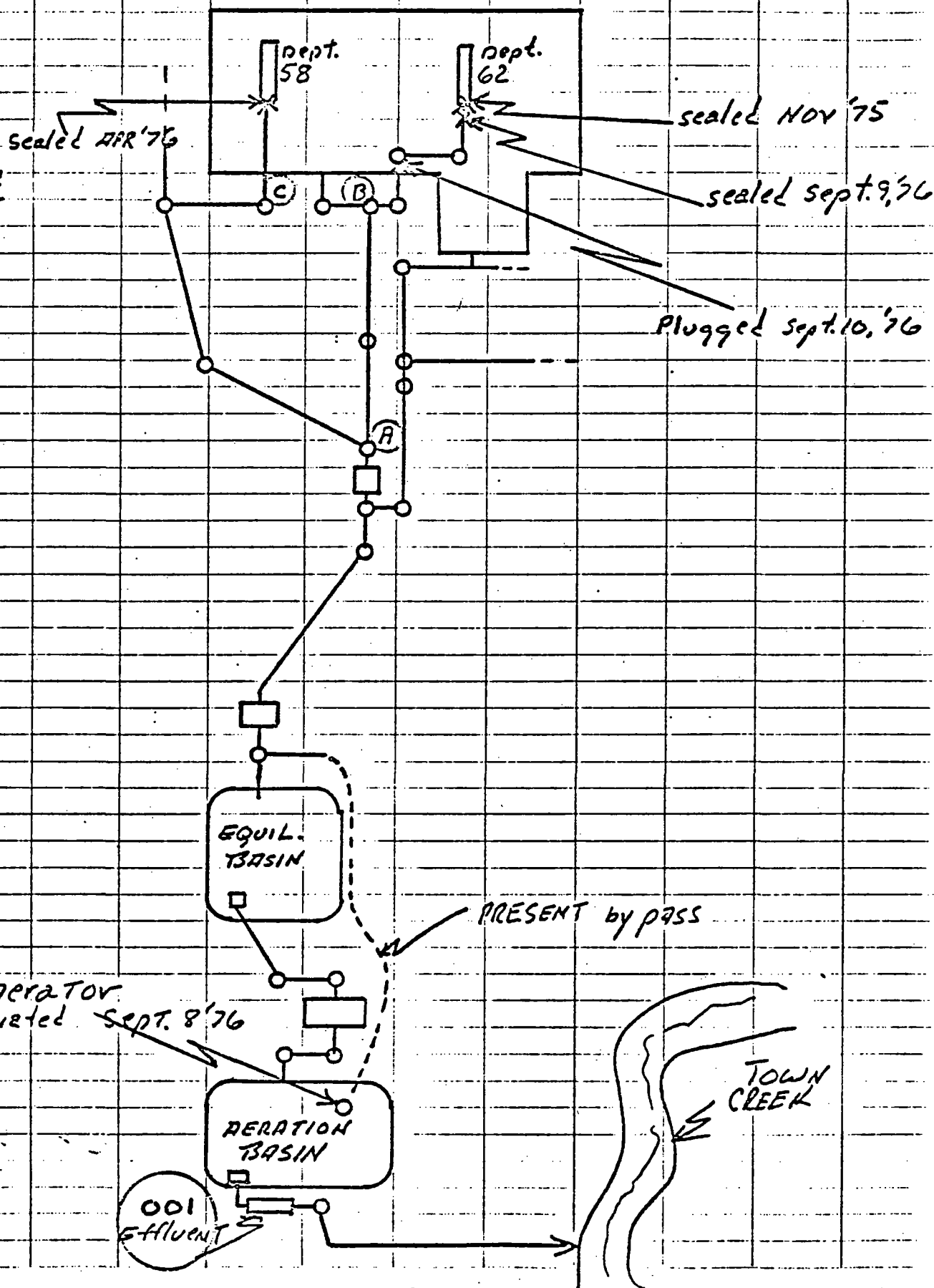
SAMPLING POINTS ①

A-

B-

C-

001 - Effluent



53

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS. SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



PHONE: 803-878-6311
TWX: 810-397-2496
TELEX: 57-0441

September 20, 1976

Director, Enforcement Division
U. S. Environmental Protection Agency
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

RE: Administrative Order No. AO-76-111 (W)

Dear Sir:

The data requested by the referenced administrative order
paragraph 3 page 3 is enclosed.

Yours truly,

SANGAMO CAPACITOR DIVISION

Jessie L. Butner

Jessie L. Butner
Mfg. Services Mgr.

JLB/lwp

cc: Deputy Commissioner Environmental Quality Control, SCDHEC
Mr. Lewis Smoak - Thompson, Ogletree & Deakins
Mr. J. C. Hydrick - Sangamo Capacitor Division
Mr. R. Cochran - " " "

INS SANG 001 915/16:76 1016 1254 8.31
7.7 0.75
7.5 0.69

003 15/16 102 90 194
105 91

2257 026 57 ND 57
Not Bpings 57 ND

2758 01 20 ND
New Rep. Room

RECEIVED
EPA/REGION IV
SEP 22 3 05 PM '76
ENFORCEMENT
DIVISION

① 001 sample NO 9-13-77 WAS A GRAB SAMPLE

PAGE 1 of 2

DATE SAMPLE TAKEN	EFFLUENT (001)		MANHOLE A		MANHOLE B		MANHOLE C		REMARKS
	EPA	G S	EPA	G S	EPA	G S	EPA	G S	
8-4-76		7							
8-11-76		2.9							
8-18-76		1.6							
8/24-25/76	11	2	50	14					SAMPLE TAKEN BY EPA SPLIT WITH SANG
8/25-26/76	8.8	ND	58	12					SAMPLE TAKEN BY EPA SPLIT WITH SANG
8-25-76		ND		15					
8-30-76		4		28					
8-31-76		5		14					
9-1-76		5		20					
9/1-2/76	20.9	9 13.2	101.2	39 67					SAMPLE TAKEN BY EPA SPLIT WITH SANG
9/2-3/76	33.3	17 15.5	112.8	33 46	1816	57 965	43.9	17 21.2	SAMPLE TAKEN BY EPA SPLIT WITH SANG
9-2-76		13		20					
9-9-76		10							
9-10-76		9 6		1 11.3					
9-11-76		5 3.37		7 14.54			23 50		
9-12-76		5 2.7		6 3.9			27 60.7		
9-13-76	①	12 12.6		5 7					
9-3-76		8		27					
9-4-76		7							

② SAMPLE TAKEN ON 9/6-9/76 @ 001 WAS A GRAB SAMPLE
EPA - SAMPLE EVALUATED IN EPA LAB.

G - SAMPLE EVALUATED IN GALBRITH LAB. (KNOXVILLE, TENN.)

S - SAMPLE EVALUATED IN STEWART LAB. (KNOXVILLE, TENN.)

ALL SAMPLES ARE COMPOSITE UNLESS NOTED OTHERWISE

ALL DATA IS IN PPB

[illegible]

EPA - SAMPLE EVALUATED IN EPA LAB.

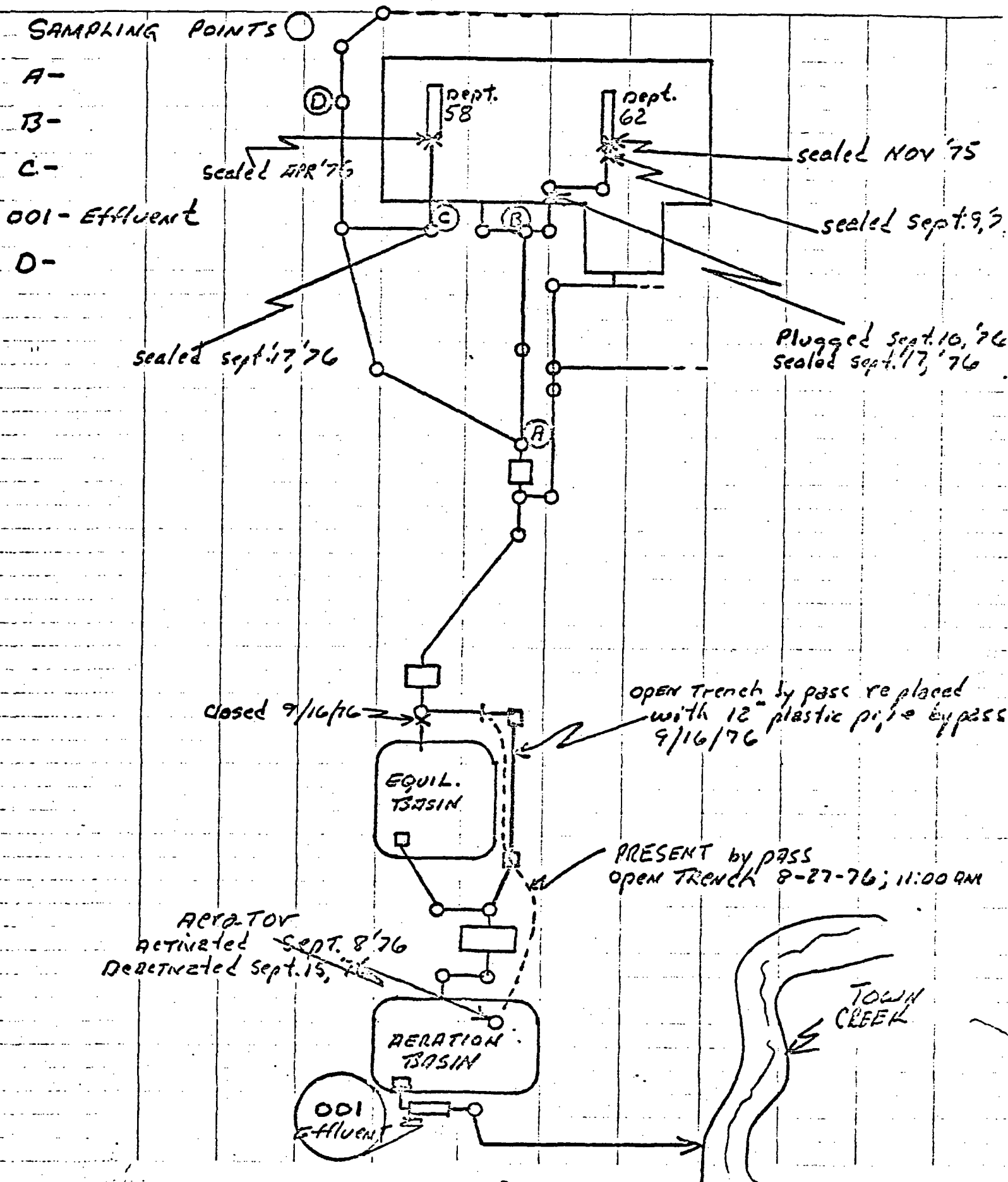
G - Sample evaluated in Galbreath Lab. (KNOXVILLE, TENN.)

S - sample evaluated in STEWART LAB. (KNOXVILLE, TENN.)

All samples are composite unless noted otherwise

All data is in ppb

9-10-76
J. T. TUNER



54

Ex 54

SANGAMO ELECTRIC COMPANY

POST OFFICE BOX 128

PICKENS, SOUTH CAROLINA 29671, U.S.A.

CAPACITOR DIVISION



PHONE: 803-878-6311
TWX: 810-397-2496
TELEX: 57-0441

September 27, 1976

Director, Enforcement Division
U. S. Environmental Protection Agency
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

RE: Administrative Order No. AO-76-111 (W)

Dear Sir:

The data requested by the referenced administrative order paragraph 3 page 3 is enclosed. This data covers the period August 4th thru September 28th.

Truly yours,

SANGAMO CAPACITOR DIVISION

Jessie L. Butner
Mfg. Services Mgr.

JLB/lwp

cc: Deputy Commissioner Environmental Quality Control, SCDHEC
Mr. L. Smoak - Thompson, Ogletree & Deakins
Mr. J. C. Hydrick - Sangamo Capacitor Division
Mr. R. Cochran - " " "

RECEIVED
EPA/REGION IV
OCT 1 11 12 AM '76
ENFORCEMENT
DIVISION

Johnson

① 001 sample NO 9-13-76 WAS A GRAB SAMPLE

PAGE 1 of 2

DATE SAMP TAKEN	EFFLUENT (001)		MANHOLE A		MANHOLE B		MANHOLE C		REMARKS
	EPA	G S	EPA	G S	EPA	G S	EPA	G S	
8-4-76		7							
8-11-76		2.9							
8-18-76		1.6							
8/24-25/76	11	2	50	14					SAMPLE TAKEN by EPA SPLIT WITH SANG
8/25-26/76	8.8	ND	58	12					SAMPLE TAKEN by EPA SPLIT WITH SANG
8-25-76		ND		15					
8-30-76		4		28					
8-31-76		5		14					
9-1-76		5		20					
9/1-2/76	20.9	9 15.2	101.2	39 69					SAMPLE TAKEN by EPA SPLIT WITH SANG
9/2-3/76	33.3	17 15.5	112.8	33 46	1816	57 965	43.9	17 21.2	SAMPLE TAKEN by EPA SPLIT WITH SANG
9-2-76		13		20					
9-9-76		10							
9-10-76		9 6		1 11.3					
9-11-76		5 3.37		7 14.54			23 50		
9-12-76		5 2.7		6 3.9			27 60.7		
9-13-76	①	12 17.6		5 7					
9-3-76		8		27					
9-4-76		7							

⑤ SAMPLE TAKEN ON 9/2-3/76 @ 001 WAS A GRAB SAMPLE
EPA - SAMPLE EVALUATED IN EPA LAB.

G - SAMPLE EVALUATED IN GALBRAITH LAB. (KNOXVILLE, TENN.)

S - SAMPLE EVALUATED IN STEWART LAB. (KNOXVILLE, TENN.)

ALL SAMPLES ARE COMPOSITE UNLESS NOTED OTHERWISE

ALL DATA IS IN PPB

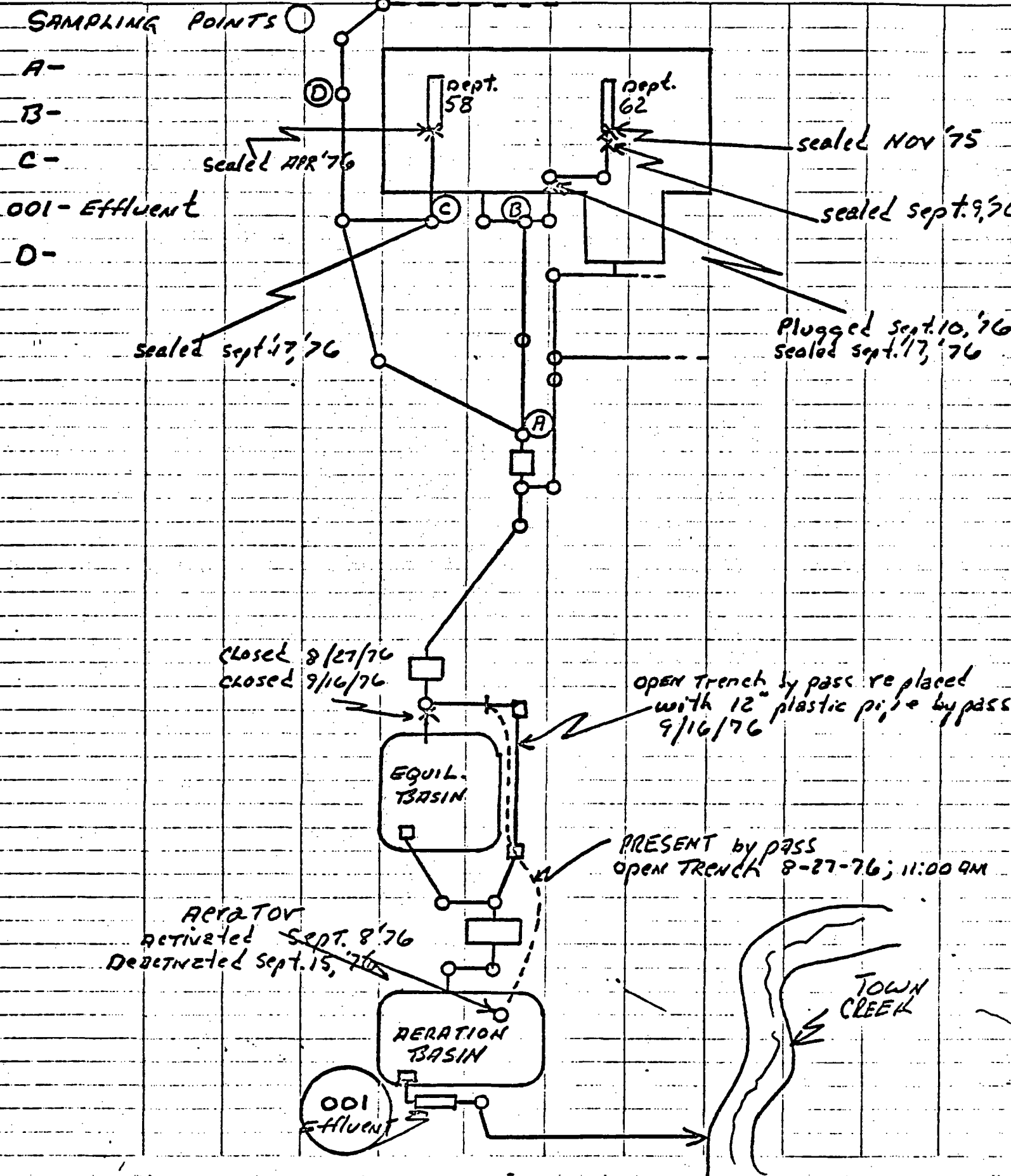
page 2 of 2

EPA - SAMPLE EVALUATED IN EPA LAB.

S - Sample evaluated in STEWART LAB. (KNOXVILLE, TENN.)

All data is in ppb.

9-10-76
J. BUTNER



9/13/76
Butner

[illegible]

* The sample taken on 7/2-3/76 @ 001 was a grab sample
EPA - sample evaluated in EPA Lab.

G - Sample evaluated in Galbraith Lab. (KNOXVILLE, TENN.)

5 - sample evaluated in STUART Lab. (KNOXVILLE, TENN.)

All samples are composite unless noted otherwise

04 10/10/10

9-10-76
J. BUTNER

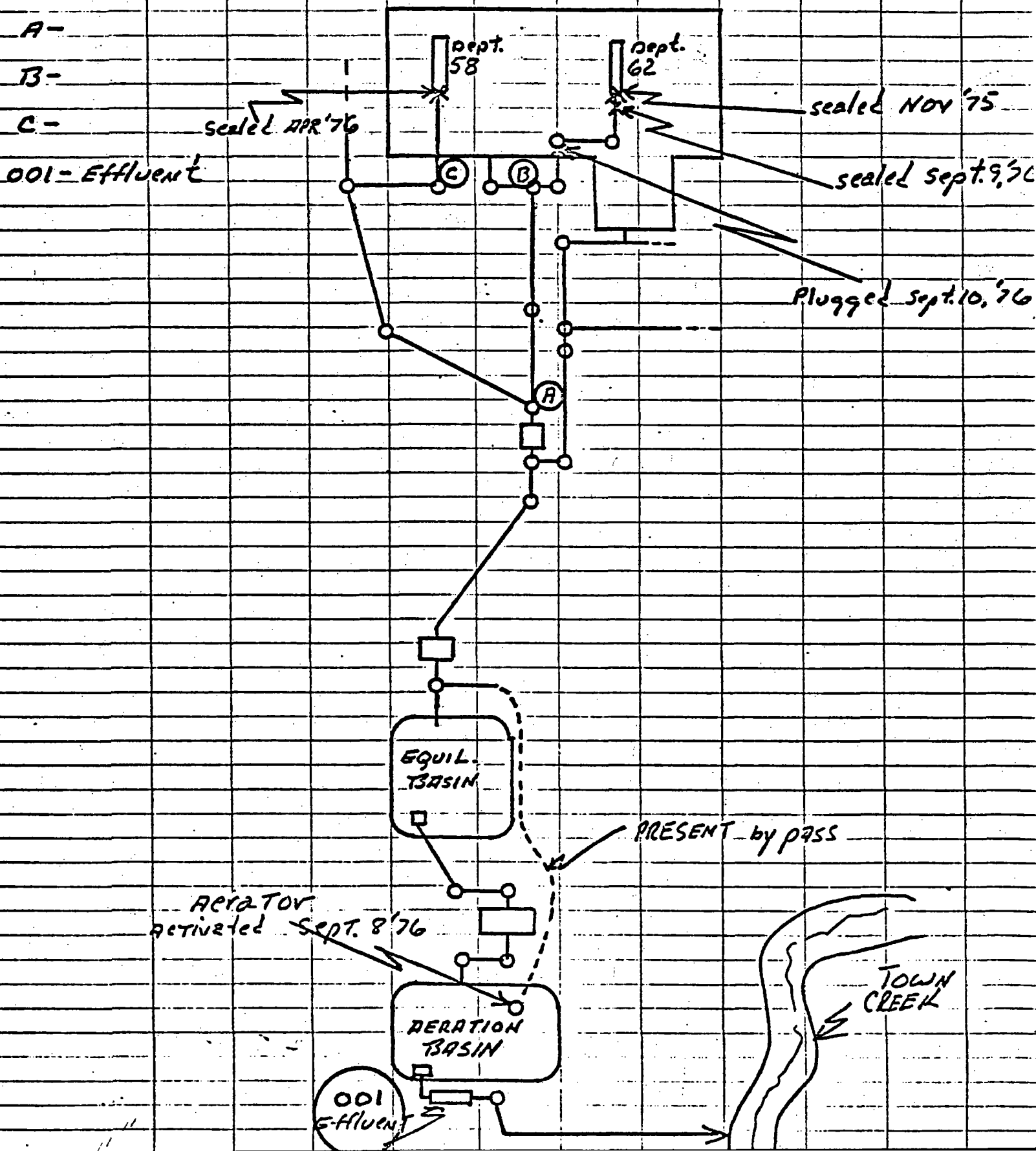
SAMPLING POINTS ○

A-

B-

C-

001 - Effluent



55



Ex 55
Lachlan L. Hyatt, Chairman
William M. Wilson, Vice-Chairman
I. DeQuincey Newman, Secretary
W. A. Barnette, Jr.
Leonard W. Douglas, M.D.
J. Lorin Mason, Jr., M.D.
William C. Moore, Jr., D.M.D.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

E. KENNETH AYCOCK, M.D., M.P.H., COMMISSIONER
J. MARION SIMS BUILDING — 2600 BULL STREET
COLUMBIA, SOUTH CAROLINA 29201

Memorandum

To: All Concerned

From: Bill McAndrew *WBM*
Special Services Section
Division of District Services

Subject: Historical Data for Polychlorinated Biphenyls

Date: March 31, 1976

Listed below is all the historical data for polychlorinated biphenyls that DHEC has accumulated:

Date	Station & Description	Concentration	Aroclor
1/9/74	MD-81A - Pee Dee River at bridge on U. S. 17	173.27 ug/kg in sediment	1254
1/9/74	S-207 - SCE&G Park at Lake Murray on North side of dam	1.53 ug/kg in sediment	1260
2/9/74	PD-227 - Williamsburg County - Black River at bridge on Secondary Road #35	16 ug/kg in sediment	1254
6/17/74	PD-12 - Marlboro County- Pee Dee River at bridge on U. S. 1	1.48 ug/kg in sediment	1260
1/17/74	E-54 - Four Hole Swamp at bridge on U. S. 15	720 ug/kg in sediment	1260
11/14/74	PD-12 (See above)	18.58 ug/kg in sediment	1254
1/14/75	PD-318 - Williamsburg, Georgetown, and Marion Counties. Great Pee Dee River at end of unimproved Road #34, down 2.4 mile take logging road to river.	17.3 ug/kg in sediment	1254

March 31, 1976

Date	Station & Description	Concentration	Aroclor
1/21/75	S-11C - Greenville County. Reedy River at bridge on Secondary Road #87 3.9 miles N.W. of the center of Greenville.	8.14 ug/kg in sediment	1254
1/21/75	SV-69 - Aiken County. Wilkerson Creek at bridge on old U. S. 1 near Warrenville	44.66 ug/kg in sediment	1232
1/22/75	S-21 - Laurens County. Reedy River at bridge on Secondary Road #6	7.03 ug/kg in sediment	1254
1/23/75	MD-14 - Beaufort County. MacKay Creek at bridge on U. S. 278	82.69 ug/kg in sediment	1254
7/31/74	SV-282 - Pickens County. Twelve Mile Creek at bridge on Secondary Road #273	135,751.0 ug/kg in fish	1248
7/31/74	SV-107 - Pickens County. Twelve Mile Creek at bridge on S. C. #133	2,638 ug/kg in fish	1254
7/24/75	S-201 - Greenville County. Mountain Lake Colony swimming area. Located off U. S. 276 at S. C. 11	3,239 ug/kg in fish	1232
8/1/75	B-318 Spartanburg County. Tyger River at Hwy. 56	1,214 ug/kg in fish	1232
5/27/74	Easley taste and odor problem #3 raw water	1.19 ug/l in water	1242
5/28/74	Easley taste and odor problem. #5 Twelve Mile Creek	1.5 ug/l in water	1242
	#6 Pumping Station	1.62 ug/l in water	1242
	#7 Reservoir	1.90 ug/l in water	1242
7/17/75	870 P4054 239005 - Norris Finished Drinking water.	0.55 ug/l in water	1248

Memorandum to All Concerned

Page 3

March 31, 1976

Date	Station & Description	Concentration	Aroclor
2/14/76	60955 SA50 Easley-Central District Office	1.82 ug/l in water	1242
SPECIAL STUDY PERFORMED BY SPECIAL SERVICES SECTION			
11/20/75	Haygood Reservoir near City of Pickens	0.19 ug/l in water	mixture
11/20/75	Unnamed tributary to Hay- good Reservoir	0.3 ug/l in water	mixture
11/20/75	Haygood Creek	0.28 ug/l in water	mixture
11/20/75	Twelve Mile Creek	0.2 ug/l in water	mixture
11/20/75	City of Pickens raw drink- ing water	0.12 ug/l in water	mixture
11/20/75	City of Pickens finished drinking water	0.2 ug/l in water	mixture
11/20/75	Town Creek 100 yds. below Sangamo Electric Company	2.65 ug/l in water	mixture
11/20/75	Sangamo Electric effluent	20.34 ug/l in water	mixture
1/6/76	City of Pickens finished drinking water	<0.1 ug/l in water	---
1/20/76	City of Norris finished drinking water	0.44 ug/l in water	1016
1/20/76	Leachate from Sangamo E- lectric landfill	1.6 ug/l in water	1016
1/26/76	McGraw-Edison (Greenwood) effluent	19 ug/l in water	1016
2/10/76	Sangamo Electric influent	<0.1 ug/l in water	1016
		<0.1 ug/l in water	1254

Needs to be clarified

March 31, 1976

Date	Station & Description	Concentration	Aroclor
2/10/76	Sangamo Electric Oily- water separation	12,000 ug/l in water 16,000 ug/l in water	1016 1254
2/10/76	Sangamo Electric neutralization pond	770 ug/l in water	1016
2/10/76	Sangamo Electric holding area	3,200 ug/kg in soil 2,700 ug/kg in soil	1016 2700

BMCA/al

56

Report on: Analyses of fish collected in connection with Biological Monitoring Program with special reference to the occurrence and levels of PCB compounds in fish tissues.

Submitted by: Russell W. Sherer
Biological Monitoring

In March, 1976, concern was expressed by the Special Studies Section about the levels of Polychlorinated biphenyls (PCB's) identified in water samples collected from the Twelve Mile Creek, Pickens County, S.C., area. Data concerning PCB levels in fish collected by the Biological Monitoring Section was available and at that time only information for fish collected during 1974 was on hand. From a total of 87 fish samples collected from 41 of 57 stations and analyzed for organic compounds, two (2) contained PCB's. These samples were collected at stations SV-282 (Twelve Mile Creek) and SV-107 (Twelve Mile Creek arm of Lake Hartwell). In both cases, three (3) samples were provided from these locations and only one of these three contained PCB's. The specific levels and sample information are contained in Table I.

During 1975, the number of stations sampled was increased to 74. 109 samples of sufficient size were collected from 39 of these 74 stations and analyzed for organic residues. 16 of the samples analyzed contained PCB's (Table I) and represented collections from eight (8) different locations (Figure I)

In April, 1976, a special fish collection was made in the Twelve Mile Creek arm of Lake Hartwell. 1975 fish results were not available at that time but it was felt that the 1974 data indicated a problem and that additional samples would aid in assessing the magnitude of the situation. Nine (9) additional samples were collected, of which six (6) were composites of two (2) or more fish. All nine of these samples contained PCB's.

In general, the fish collected from SV-282 and SV-107 contained excessive levels of PCB's, levels which exceed FDA's interim tolerance of 5ppm PCB's in fish. Of the 23 samples collected and analyzed from these two locations, 18 contained PCB's. Two fish samples collected from SV-282 (Twelve Mile Creek at bridge on Sec. Rd. #273, 2.8 mi. SSW center of Pickens) contained 136ppm and 202ppm PCB's, respectively. 15 fish samples representing 29 individual fish have been collected at SV-107 (Twelve Mile Creek at bridge on S.C. #133) and contained PCB levels ranging from 1ppm to 181ppm PCB. At SV-288 (Hartwell Reservoir at S.C. Hwy. #24, 9.7 mi. NNW. of Anderson), 4 of 5 fish samples analyzed contained PCB's in concentrations ranging from 0.3 to 3 ppm PCB. Ten (10) different species of fish have been collected

at SV-107 and represent both game and non-game species. Also, the fish collected range in feeding habits from filter and bottom feeders to carnivores.

Table 2 represents the total number of fish collected from each station where the presence of PCB's in fish tissue have been recorded as well as the number of fish which actually contained PCB's. This table indicates that a high percentage of samples containing PCB's originate from Lake Hartwell. With this information and that concerning the levels of PCB's found in fish from Lake Hartwell, it is recommended that this information be provided to the public along with a caution concerning consumption of fish from Lake Hartwell, specifically in the Twelve Mile Creek area and/or from Twelve Mile Creek. PCB contamination of fish at SV-288 has taken place but the levels recorded do not exceed 5 ppm.

Fish collections in all areas where PCB's were found in fish during 1975 have been made during the current summer sampling program. Additional sampling is planned in some of these areas but it is felt that sufficient data exists in the Lake Hartwell area in order to draw conclusions. Should PCB sources continue to discharge into these areas, PCB levels in fish can be expected to rise through bioamplification (bioaccumulation) in a manner similar to mercury pollution situations.

TABLE I

Fish Containing Aroclor

1974 - 1975 - Spring, 1976
Biological Monitoring

Date Coll.	Sample Location	Species	WT(gms.)	Length(mm)	Aroclor conc. ppb	(form)
7/30/75	B-114	<u>Ictalurus punctatus</u>	146	236	1,691.0	(1242)
7/16/75	CW-198	<u>Micropterus salmoides</u>	-	-	1,356.0	(1242)
7/16/75	CW-198	<u>Dorosoma cepedianum</u>	-	-	5,312.0	(1242)
7/27/75	CW-214	<u>Micropterus salmoides</u>	42 or 60	-	1,291.0	(1242)
Summer, 1974	SV-107	<u>Lepomis macrochirus</u>	-	-	2,638.0	(1254)
7/29/75	SV-107	<u>Ictalurus platycephalus</u>	70 or 83	200 or 203	77,330.0	(1242)
7/29/75	SV-107	<u>I. platycephalus</u>	70 or 83	200 or 203	48,476.0	(1242)
7/29/75	SV-107	<u>Lepomis macrochirus</u>	-	-	2,582.0	(1242)
7/29/75	SV-107	<u>Micropterus salmoides</u>	2700	505	1,029.0	(1242)
7/29/75	SV-107	<u>Stizostedion vitreum</u>	1020	440	181,461.0	(1242)
4/30/76	SV-107 (n=3)	<u>Dorosoma cepedianum</u>	(\bar{x}) 310	(\bar{x}) 338	(\bar{x}) 5,549.3	(1242 or 1242 & 1016)
4/30/76	SV-107 (n=7)	<u>D. cepedianum</u>	(\bar{x}) 255	(\bar{x}) 165	(\bar{x}) 3,240.7	(1242 or 1242 & 1016)
4/30/76	SV-107 (n=3)	<u>D. cepedianum</u>	(\bar{x}) 299	(\bar{x}) 156	(\bar{x}) 2,104.3	(1242 or 1242 & 1016)
4/30/76	SV-107 (n=2)	<u>D. cepedianum</u>	(\bar{x}) 212	(\bar{x}) 95	(\bar{x}) 8,220.0	(1242)
4/30/76	SV-107 (n=3)	<u>Morone chrysops</u>	(\bar{x}) 184	(\bar{x}) 73	(\bar{x}) 9,992.7	(1242)
4/30/76	SV-107	<u>Ictalurus catus</u> (Head removed)	950	410	9,705.5	(1242)
4/30/76	SV-107 (n=2)	<u>Ictalurus nebulosus</u> (Head removed)	(\bar{x}) 217	(\bar{x}) 174	(\bar{x}) 11,591.5	(1242)
4/30/76	SV-107	<u>Cyprinus carpio</u> (Head removed)	450	-	152,628.0	(1242)

Fish Containing Aroclor

1974 - 1974 - Spring, 1976
Biological Monitoring

<u>Date</u> <u>Coll.</u>	<u>Sample</u> <u>Location</u>	<u>Species</u>	<u>WT(gms.)</u>	<u>Length(mm)</u>	<u>Aroclor</u> <u>conc. ppb</u>	<u>(form)</u>
4/30/76	SV-107	<u>Lepomis gulosus</u>	68	155	12,441.0	(1242)
7/24/75	SV-193	<u>Micropterus salmoides</u>	-	-	2,667.0	(1242)
Summer, 1974	SV-282	<u>Lepomis macrochirus</u>	-	-	135,751.0	(1248)
7/30/75	SV-282	<u>Ictalurus brunneus</u>	126	245	201,810.0	(1242)
7/29/75	SV-288	<u>Ictalurus brunneus</u>	104	234	1,145.0	(1242)
7/29/75	SV-288	<u>Micropterus salmoides</u>	260	240	2,746.0	(1242)
7/29/75	SV-288	<u>Lepomis macrochirus</u>	220	235	1,057.0	(1242)
7/29/75	SV-288	<u>Pomoxis nigromaculatus</u>	192	235	348.5	(1242)
7/24/75	SV-291	<u>Pomoxis annularis</u>	110.	210	200.0	(1242)

TABLE II

Locations where PCB's have been recorded in fish and total number of fish analyzed.

<u>Location</u>	<u>Description</u>	<u># of Fish Sampled-Analyzed for PCB's</u>	<u># of Fish Containing PCB's</u>	<u>Date of Coll.</u>
B-114	Bowen Lake at boat landing on S.C. Hwy. #9, 5mi. N.E. center of Inman.	3	1	1975
CW-198	Boat Sample Station, approx. 1.5 mi. downstream from CW-28 where the main body of lake Wylie has two major forks shown on map.	9	2	1975
CW-214	Wateree River at bridge on I-20. Put in at end of Sec. Rd. #727.	1	0	1974
		3	1	1975
SV-107	Twelve Mi. Creek at bridge on S.C. #133	3	1	1974
		6	5	1975
		9	9	1976(A)
SV-193	Long Cane Cr. at bridge on Sec. Rd. #36, 7.6 mi. NNW of McCormick	2	0	1974
		1	1	1975
SV-282	Twelve Mile Creek at bridge on Sec. Rd. #273, 2.8 mi. SSW center of Pickens	3	1	1974
		1	1	1975
SV-288	Hartwell Reservoir (Seneca River) at S.C. Hwy. #24, 9.7 mi. NNW of Anderson	5	4	1975
SV-291	Clark Hill Reservoir at bridge on Hwy. #378, 7 mi. SW of McCormick	4	1	1975

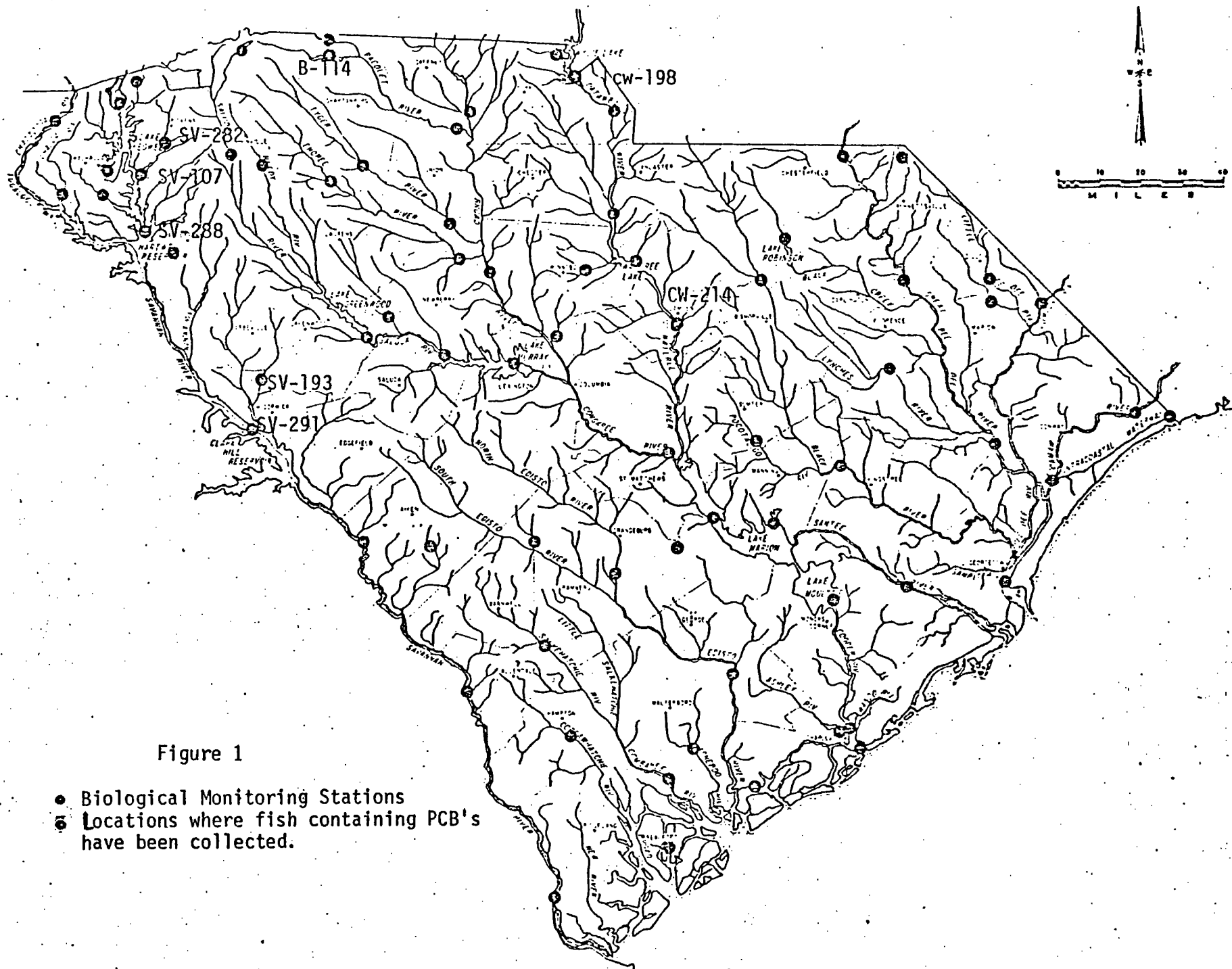
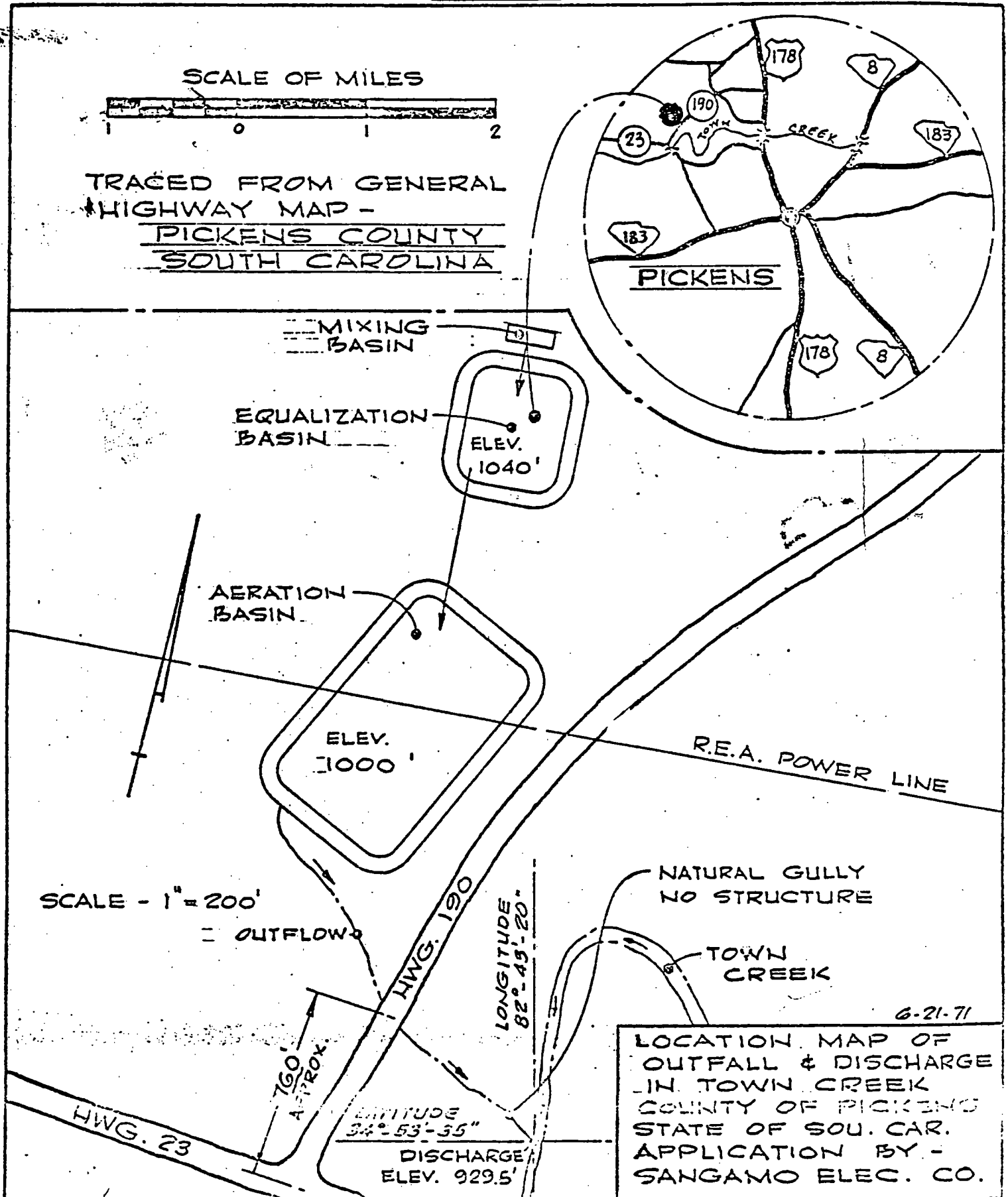


Figure 1

- Biological Monitoring Stations
- Locations where fish containing PCB's have been collected.

Attachment A



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EX 37

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region IV, Surveillance and Analysis Division
College Station Road, Athens, Georgia 30601

SUBJECT: Analyses of Lake Hartwell Fish Tissue for
Polychlorinated Biphenyls (PCB's)

DATE: August 20, 1976

FROM: J. H. Finger, Director
Surveillance and Analysis Division.

TO: Jack E. Ravan
Regional Administrator

SUMMARY

Additional fish were collected by the Ecology Branch, Region IV, the South Carolina Department of Health and Environmental Control, and the Georgia Game and Fish Commission during August 11 to 14, 1976. These fish were analyzed by the Laboratory Services Branch and the University of Georgia's Cooperative Extension Service. The purpose of the collection and analysis is to better describe the PCB contamination of fish, by area and species, in Lake Hartwell and the data are presented in the attached table.

The analyses were conducted on fish filets and are reported in parts per million (mg/kg) of total PCB on a wet weight basis.

DATA ANALYSIS

Several general conclusions can be extracted from these data.

- 1 - Catfish, striper and largemouth bass are contaminated in the Tugaloo River arm and are above background levels normally found in the southeast United States.
- 2 - Catfish, striper and largemouth bass are contaminated in the large section of the lake above Hartwell Dam. The degree of contamination is much greater than the Tugaloo River arm and is approaching the U.S. Food and Drug standard or guideline of 5 mg/kg.
- 3 - Fish from the lower area of the Seneca arm are contaminated. Based on limited data from this area, it appears that the level of contamination of fish at the present time is not as great as in the area just above Hartwell Dam.
- 4 - Catfish, largemouth bass, stripe bass, walleye and blue gill are grossly polluted with PCB's in the lake section of Twelve Mile Creek. Data indicate that largemouth bass and walleye are contaminated by a factor of twenty-two

times that of the U.S. Food and Drug standard.

- 5 - Fish in the Twelve Mile Creek stream section are grossly PCB polluted and far exceed the U.S. Food and Drug standard.

ACTION

- o Sediment analyses should be conducted to better describe PCB contamination of Lake Hartwell. It is quite possible that the sediments trapped just above Hartwell Dam contain more PCB than the sediments in the lower arm of the Seneca arm. This would explain the greater fish contamination at Long Point as compared to the lower Seneca arm.
- o The public should be warned of the gross PCB contamination of all fish in the lake section of Twelve Mile Creek.
- o A toxicologist (M.D. type) should examine the data and make recommendations as to human consumption of fish from the lower lake area as the contamination is approaching the U.S. Food and Drug guideline.

BACKGROUND

The Atlanta August 12, 1976 meeting with South Carolina DHEC, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Georgia EPD, Georgia DWR - Fisheries Section and Region IV staff.

LOCATION	SAD #	LOT #	SPECIES	LENGTH CM	WEIGHT GMS	COMPOSITE NUMBER	AROCLO 1016 mg/kg	AROCLO 1254 mg/kg	TOTAL PCB mg/kg	AROCLO 1016 mg/kg	AROCLO 1254 mg/kg
Tugaloo River near Marina	1667	76-0048	White Cat- fish	25CM	184	1	ND	0.10	0.10	ND ^{3/}	0.63
		76-0064	Brown Bull- head	26CM	142	1				ND ^{3/}	0.41
		76-0047	Striper	26CM	213	2	ND	0.13	0.13	ND ^{3/}	0.36
		76-0062	Striper	28CM	255	2				ND ^{3/}	0.50
		76-0063	Striper	27CM	269	2				ND ^{3/}	0.34
		76-0049	Largemouth Bass	36CM	524	3				ND ^{3/}	ND ^{1/}
		76-0050	Largemouth Bass	29CM	269	3				ND ^{3/}	0.23
		76-0051	Largemouth Bass	33CM	482	3	ND	0.20	0.20	ND ^{3/}	0.67
		76-0053	Largemouth Bass	26CM	227	3				ND ^{3/}	0.34
		76-0055	Largemouth Bass	25CM	170	3				ND ^{3/}	0.27
		760054	Spotted Bass	22CM	113	3				ND ^{3/}	0.61
		76-0065	Channel Cat- fish	35CM	312	1	.11	4.9	5.0	ND ^{3/}	4.1
		76-0061	Bullhead Catfish	16CM	58	1				ND ^{3/}	ND ^{2/}
		76-0066	Striper	31CM	369	2	.11	2.4	2.5	ND ^{3/}	3.3
Savannah R. Long Point	1668	76-0067	Striper	31CM	397	2				ND ^{3/}	0.40
		76-0056	Largemouth Bass	53CM	1843	3				ND ^{3/}	3.8
		76-0057	Largemouth Bass	42CM	1106	3				ND ^{3/}	3.6
		76-0058	Largemouth Bass	38CM	680	3	0.22	1.8	2.0	ND ^{3/}	2.9
		76-0059	Largemouth Bass	28CM	284	3				ND ^{3/}	0.55
		76-0060	Largemouth Bass	19CM	85	3				ND ^{3/}	ND ^{2/}

<u>LOCATION</u>	<u>SAD #</u>	<u>LOT #</u>	<u>SPECIES</u>	<u>LENGTH CM</u>	<u>WEIGHT GMS</u>	<u>COMPOSITE NUMBER</u>	<u>AROCLOR 1016 mg/kg</u>	<u>AROCLOR 1254 mg/kg</u>	<u>TOTAL PCB mg/kg</u>	<u>AROCLOR 1016 mg/kg</u>	<u>AROCLOR 1254 mg/kg</u>
Twelve Mile Creek	1669	76-0072	Largemouth Bass	32.2CM	430	1	6.3	17.0	23.0	----	-----
Stream Section		76-0073	Bluegill	17.4CM	98	2	6.2	9.4	16.0	----	-----

All samples collected August 12 and 13, 1976

Minimum Detection Limit, Laboratory Services Branch

0.05 0.10 0.10

1/

Minimum Detection Limit 0.1 mg/kg - UGA, CES

2/

Minimum Detection Limit 0.3 mg/kg - UGA, CES

3/

Minimum Detection Limit 0.2 mg/kg - UGA, CES

4/Concentrations in Filets on a wet weight basis

<u>LOT #</u>	<u>QUALITY CONTROL DATA - UGA, CES</u> <u>AROCLOR 1254 mg/kg</u>
0048	0.509 0.755
0064	0.391 0.435
0065	3.46 4.73
0066	3.19 3.44

LOCATION	SAD #	LOT #	SPECIES	LENGTH CM	WEIGHT GMS	COMPOSITE NUMBER	AROCOLOR 1015 mg/kg	AROCOLOR 1254 mg/kg	TOTAL PCB mg/kg
Twelve Mile Creek - Lake Section	1670	76-0085	White Cat- fish	24.4	150	1	9.7	43	53
		76-0086	Bullhead Flat	20.7	102	1			
		76-0081	Largemouth Bass	38.0	780	2	20	86	110
		76-0076	Stripe Bass	29.0	280	3			
		76-0082	Stripe Bass	53.5	1900	3	12	42	54
		76-0083	Stripe Bass	27.7	264	3			
		76-0077	Walleye	51.5	1420	4	28	82	110
		76-0079	White Crappie	22.4	130	5			
		76-0080	White Crappie	21.5	144	5	3.1	8.0	11
		76-0084	White Crappie	21.2	130	5			
Seneca River	1671	76-0089	Bluegill	17.0	90	1	0.09	1.0	1.1
		76-0090	Bluegill	16.0	68	1			
		76-0087	Largemouth Bass	26.0	195	2	0.068	0.33	0.40
Minimum Detection Limit							0.05	0.10	0.10

PROJECT - PCB - Drinking Water

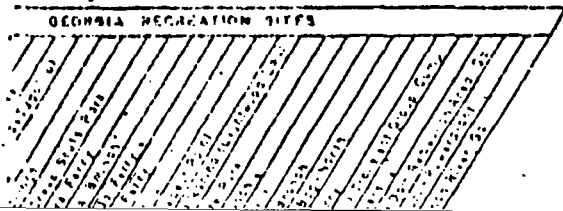
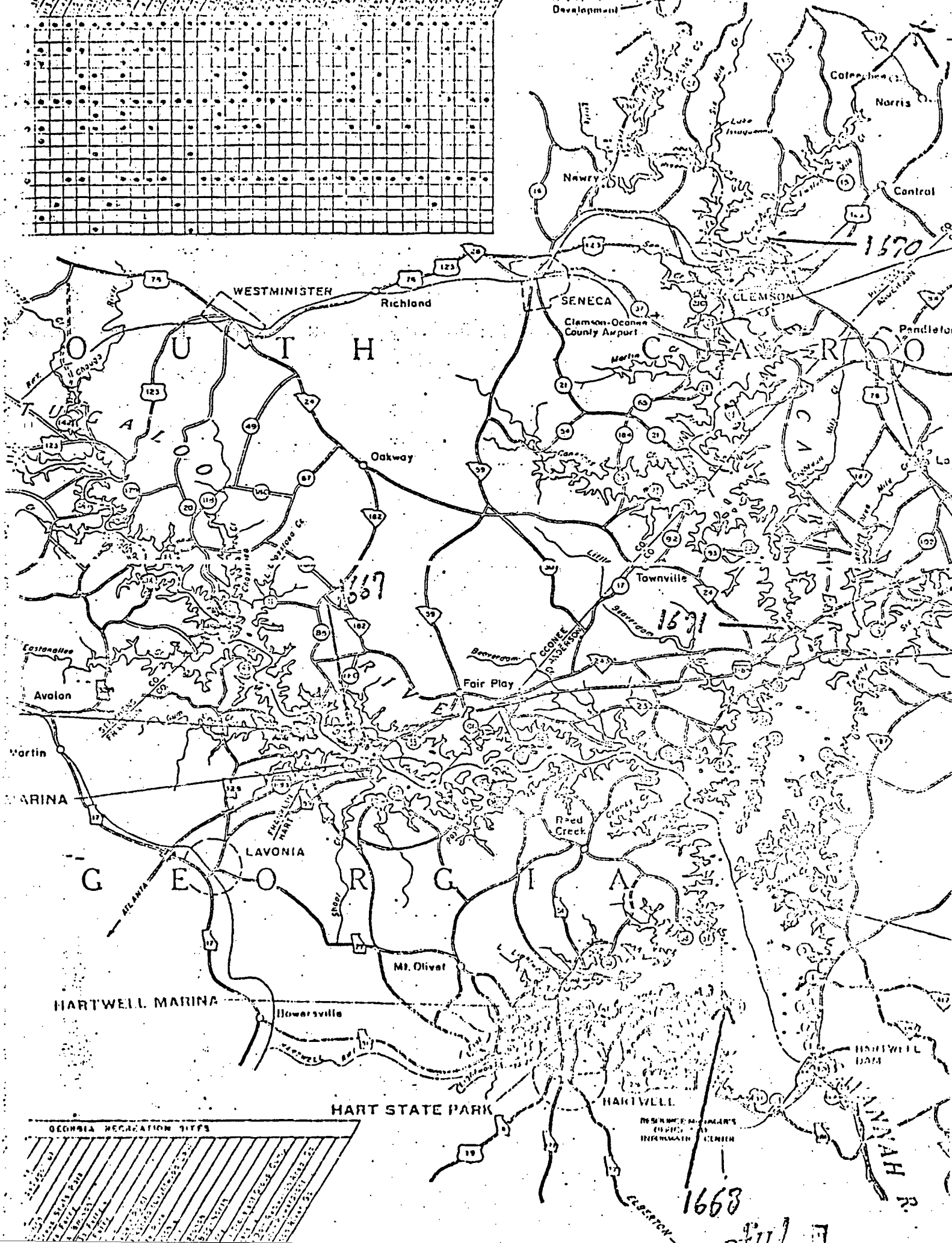
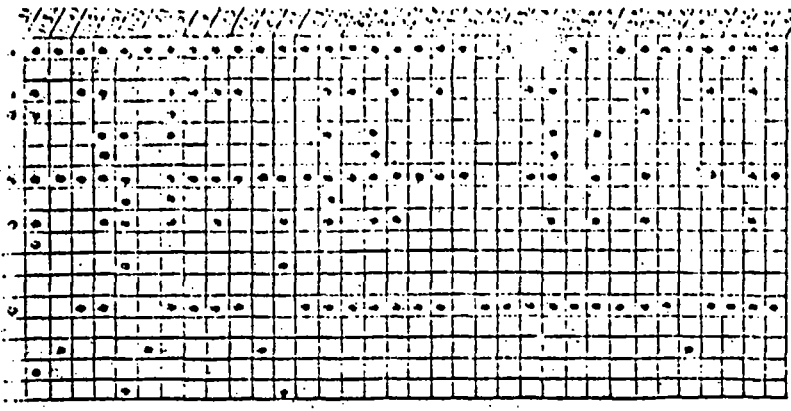
CHEMIST - E. William Loy

RECEIVED - 9/16/76

COMPLETED - 8/20/76

<u>ANALYSES TO BE RUN</u>			Aroclor	Aroclor
SAD #	Station #	Date	1016	1254
76C	No.	Sampled	ug/l	ug/l
1629	Hartwell, GA	8/16/76	ND	ND
	finished water			
1630	Hartwell, GA	8/16/76	ND	ND
	raw water			
1672	Easley, SC	1600	ND	ND
	Central,	8/12/76		
	finished water			
1673	Pickens Water	1130	ND	ND
	Plant,	8/13/76		
	finished water			
Minimum detection limit			0.025	0.05

Development



GEORGIA RECREATION SITES

1668

EASLEY QUADRANGLE
SOUTH CAROLINA
15 MINUTE SERIES (TOPOGRAPHIC)

(SALUDA 1:125,000)

35'

1.5 MI. TO S. C. 288
(PISGAH 1:125,000)

1:540,000 FEET

MARIETTA 3.1 MI.

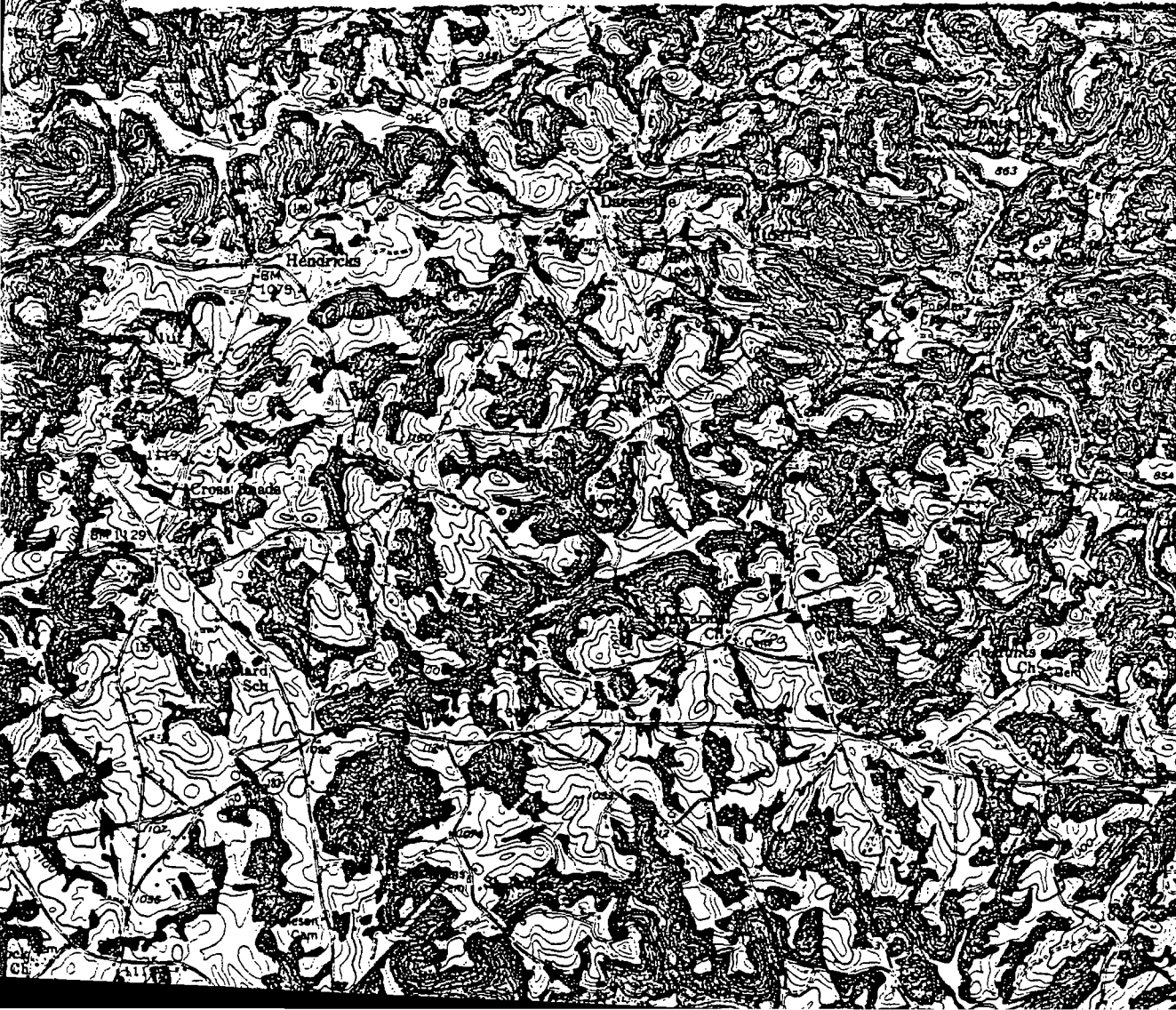
82°30'

35°00'

730,000
FEET

PCB contaminated waste disposal sites, effluent, and Town Creek
sampling point locations:

- (1) Dump on Welborn's property
- (2) Landfill on Sangamo's property
- (3) Dump on Ernest Nix's property
- (4) Dump on Brezeale's property
- (5) Dump at Cross Roads Church
- (6) Dump on Dodgens' property
- (7) Midway dump - City of Pickens
- (8) Landfill - Pickens County
- (9) Sludge from Sangamo's equalization basin disposal sites (landfill)
- (10) Sludge from Sangamo's septic system disposal site (landfill)
- (11) Town Creek sampling point, approximately 100 yards above the
point where Sangamo's effluent enters Town Creek
- (12) Sangamo's effluent sampling point, located at the discharge of
Sangamo's aeration basin



55'

2.3 MI. TO S. C. 290
GREENVILLE 1:125,000 U.S. 291 7.2 MI.

(GREENVILLE)

SANGAMO

55'

PICKENS 1:25 000
WALHALLA 24 MI
MI. TO S. C.

50'





47'30"

337

7 MI. TO U.S. 178A

338

1 470 000 FEET 339

339

82°45'

34°52'30''

PICKENS 3 MI.
GREENVILLE 24 MI.

3859

680 000
FEET

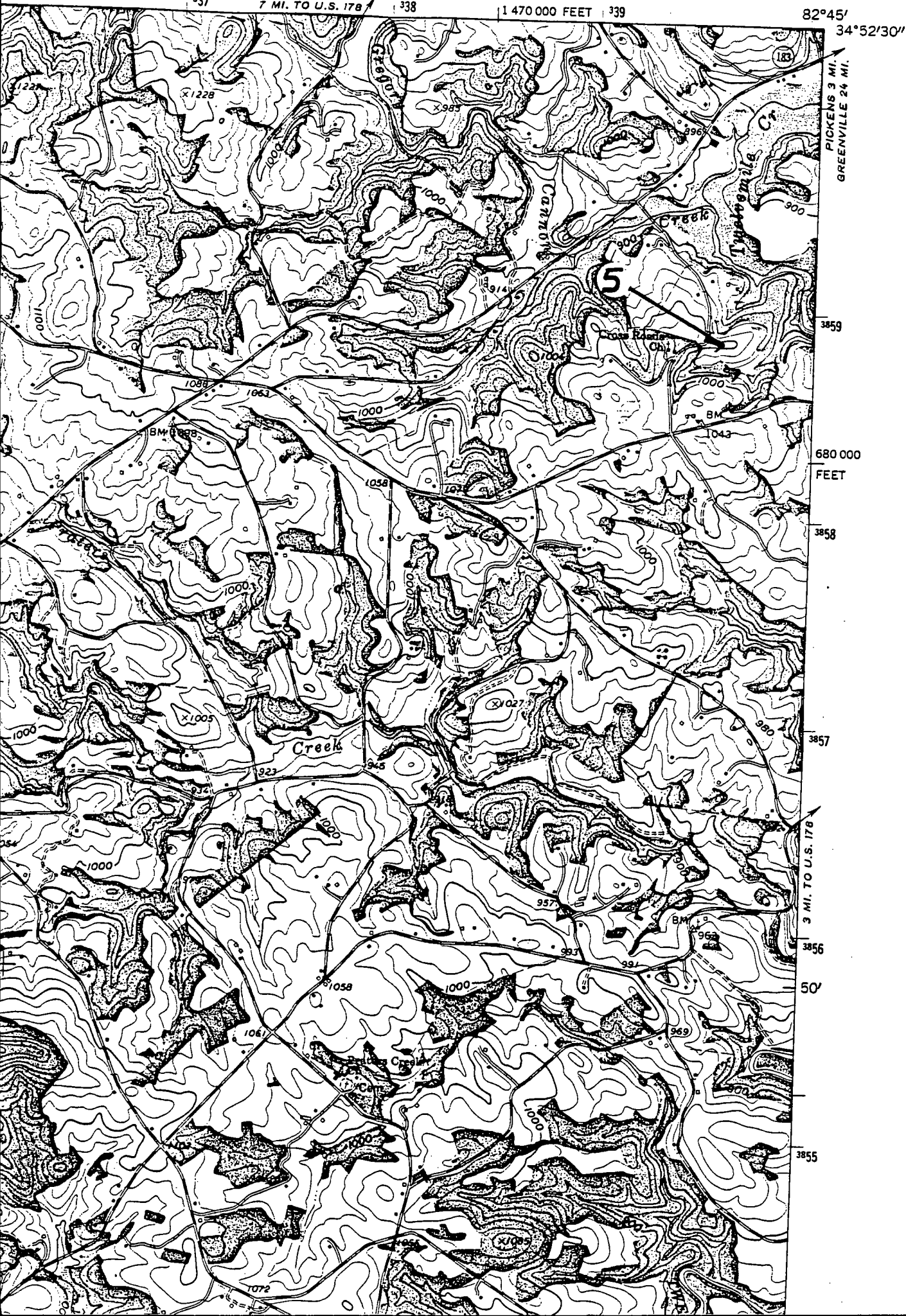
3858

3857

3856

504

3855



58

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region IV, Surveillance and Analysis Division

College Station Road, Athens, Georgia 30601

SUBJECT: Lake Hartwell Water and Sediment PCB Data

DATE: August 31, 1976

FROM:

James H. Finger
Director

TO:

Jack E. Ravan
Regional AdministratorSUMMARY

Attached are the most recent water and sediment PCB data and figures showing the sampling station locations.

We plan to assemble all of the Hartwell data collected to date and prepare a brief report describing the entire problem.

ACTION

For your information.

BACKGROUND

As per your request for additional data.

Enclosure

DATA REPORTING SHEET

PROJECT PCB Drinking Water CHEMIST Loy

RECEIVED 8/16/76

COMPLETED 8/20/76

[illegible]

DATA REPORTING SHEET

PROJECT Lake Hartwell CHEMIST E. W. Loy RECEIVED 8/25/76 COMPLETED 8/30/76
 (water) (Water Supply Branch)

ANALYSES TO BE RUN			Aroclor				
CUP NO.	SAD NO.	STATION NO.	Date Sampled	1016 $\mu\text{g/l}$			
1718		Anderson WTP 1-1 (raw)	8/25/76 1145	<0.1			
1719		Anderson WTP 1-2 (finish)	8/25/76 1145	<0.1			
1720		Riegel Textiles 2-1 (raw)	8/25/76 1250	ND			
1721		Riegel Textiles 2-2 (fin)	8/25/76 1250	ND			
1722		Clemson Univ. 3-1 (raw)	8/25/76 1335	*			
1723		Clemson Univ. 3-2 (fin.)	8/25/76 1335	ND			
1724		DeFore Mills 4-1 (raw)	8/25/76 1435	<0.1			
1725		DeFore Mills 4-2 (fin.)	8/25/76 1450	<0.1			
1726		J. P. Stevens 5-1 (raw)	8/25/76 1540	<0.1			
1727		J. P. Stevens 5-2 (fin.)	8/25/76 1540	<0.1			
1728		Pendleton Fin. Plant 6-1 (raw)	8/25/76	ND			
1729		Pendleton Fin. Plant 6-2 (fin.)	8/25/76	ND			
			* Could not determine if PCB's were present because of very high concentration of interfering compounds				
			ND - None detected.				
			Average minimum detection limit 0.1 $\mu\text{g/l}$.				

DATA REPORTING SHEET

PROJECT Lake Hartwell CHEMIST E. W. Loy RECEIVED 8/25/76 COMPLETED 8/30/76
(water)

ANALYSES TO BE RUN				Aroclor	Aroclor	Total			
CUP NO.	SAD NO. 78C	STATION NO.	DATE SAMP.	1016 ug/l	1254 ug/l	PCB's ug/l			
1985		CLI	8/24, 25/76 1530 - 1430	<1	5.1	5.1			
1986		CLI 1/	8/24/76 1530	ND	ND	ND ^{2/}			
1987		CL-E	8/24, 25/76 1545 - 1445	ND	ND	ND ^{3/}			
1988		CL-E 1/	8/24/76 1540	ND	ND	ND ^{2/}			
1989		SNG-001	8/24, 25/76 1215 - 0945	49	1.2	50.2			
1990		SNG-002	8/24, 25/76 1230 - 1000	19	0.31	19.31			
1991		SNG-003	8/24, 25/76 1245 - 1015	8.9	1.6	10.5			
1992		PW-I	8/24, 25/76 0900 - 0800	ND	29	29			
1993		PW-E	8/24, 25/76 0930 - 0830	ND	ND	ND ^{4/}			
1994		PT-I	8/24, 25/76 1020 - 0845	ND	ND	ND ^{4/}			
1995		PT-E	8/24, 25/76 1040 - 0900	ND	ND	ND ^{4/}			
1996		L-41	8/25/76 1115	1.6	0.42	2.02			
1997		L-42	8/25/76 1130	1.3	0.39	1.69			
1/ - Distilled water run through automatic sampler.				ND - None Detected.					
2/ - Minimum Detection Limit - 0.05 ug/l									
3/ - Minimum Detection Limit - 0.5 ug/l									
4/ - Minimum Detection Limit - 0. ug/l									
5/ - Minimum Detection Limit - 0. ug/l									

DATA REPORTING SHEET

PROJECT Lake Hartwell

CHEMIST E. W. Loy

RECEIVED 8-26-76

COMPLETED 8-30-76

[illegible]

DATA REPORTING SHEET

PROJECT Lake Hartwell
(water)

CHEMIST E. W. Loy

RECEIVED

8/25/76

COMPLETED 8/30/76

[illegible]

DATA REPORTING SHEET

PROJECT Lake Hartwell CHEMIST E. W. Loy RECEIVED 8/24/76 COMPLETED 8/30/76
 (Water)

ANALYSES TO BE RUN				Aroclor	Aroclor	Total				
CUP NO.	SAD NO. 76C	STATION NO.	DATE SAMP.	1016 μg/l	1254 μg/l	PCB's μg/l				
1693		MF-1	8-24-76 1000	ND	ND	ND				
1694		MF-2	8-24-76 1030	ND	ND	ND				
1695		Trotters Dump Pond Water	8-24-76 1130	0.17	0.24	0.41				
1696		Midway Dump Upstream	8-24-76 1400	ND	ND	ND				
1697		Midway Dump Downstream	8-24-76 1415	ND	ND	ND				
1698		Easley Landf. Downstream	8-24-76 1600	ND	ND	ND				
1699		Easley Landf. Upstream	8-24-76	ND	ND	ND				
1700		SNG-001 ^{1/}		ND	ND	ND				
1701		SNG-002 ^{1/}		ND	ND	ND				
1702		SNG-003 ^{1/}		ND	ND	ND				
1703		PW-E ^{1/}		ND	ND	ND				
1704		PW-I ^{1/}		ND	ND	ND				
1705		PT-E ^{1/}		ND	ND	ND				
1706		PT-I ^{1/}		ND	ND	ND				
^{1/} - Blank - Distilled water run through automatic sampler.										
ND - None detected.										
Average minimum detection limit ± 0.1 ug/l.										

DATA REPORTING SHEET

PROJECT Lake Hartwell

CHEMIST E. W. Loy.

RECEIVED 8-24-76

COMPLETED 8-30-76

(Sediment)

ANALYSES TO BE RUN				Aroclor	Aroclor	Aroclor		Total		
CUP NO.	SAD NO. 76C	STATION NO.	DATE SAMP.	1016* mg/kg	1254 mg/kg	1242 mg/kg		PCB'S mg/kg		
	1707	MF-1	8-24-76 1000	Lost During Analysis				--		
	1708	MF-2	8-24-76 1030	ND	ND	ND		ND		
	1709	Trotters Dmp Sed-1	8-24-76 1050	--	68	33*		101		
	1710	Sed-2	8-24-76 1055	--	ND	30		30		
	1711	Sed-3	8-24-76 1100	--	ND	9.6		9.6		
	1712	Sed-4	8-24-76 1130	Not Analyzed by LSB				--		
	1713	Midway Dump	8-24-76 1345	ND..	ND	--		ND		
	1714	Easley Landf Sed-6	8-24-76 1515	0.71	0.55	--		1.26		
	1715	Sed-7	8-24-76 1530	Not Analyzed by LSB				--		
	1716	Sed-8	8-24-76 1545	0.026	0.030	--		0.056		
	1717	Sed-9	8-24-76 1600	Not Analyzed by LSB				--		
				* - Aroclor 1016 and Aroclor 1242 are almost identical and cannot be distinguished from each other when Aroclor 1254 is present in significant amounts.						
				ND - None detected.						
				Minimum detection limit - 0.005 mg/kg						

DATA REPORTING SHEET

PROJECT Lake Hartwell CHEMIST RECEIVED 8/24/76 COMPLETED 8/30/76
(Sediment) Analyzed by University of Georgia, Extension Poultry Science

[illegible]

DATA REPORTING SHEET

PROJECT Lake Hartwell CHEMIST Dr. Parshall Bush RECEIVED 8-25-76 COMPLETED 8-30-76

~~(Sediment) Analyzed by University of Georgia, Extension Poultry Science~~

[illegible]

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(Sediment) Analyzed by University of Georgia, Extension Poultry Science

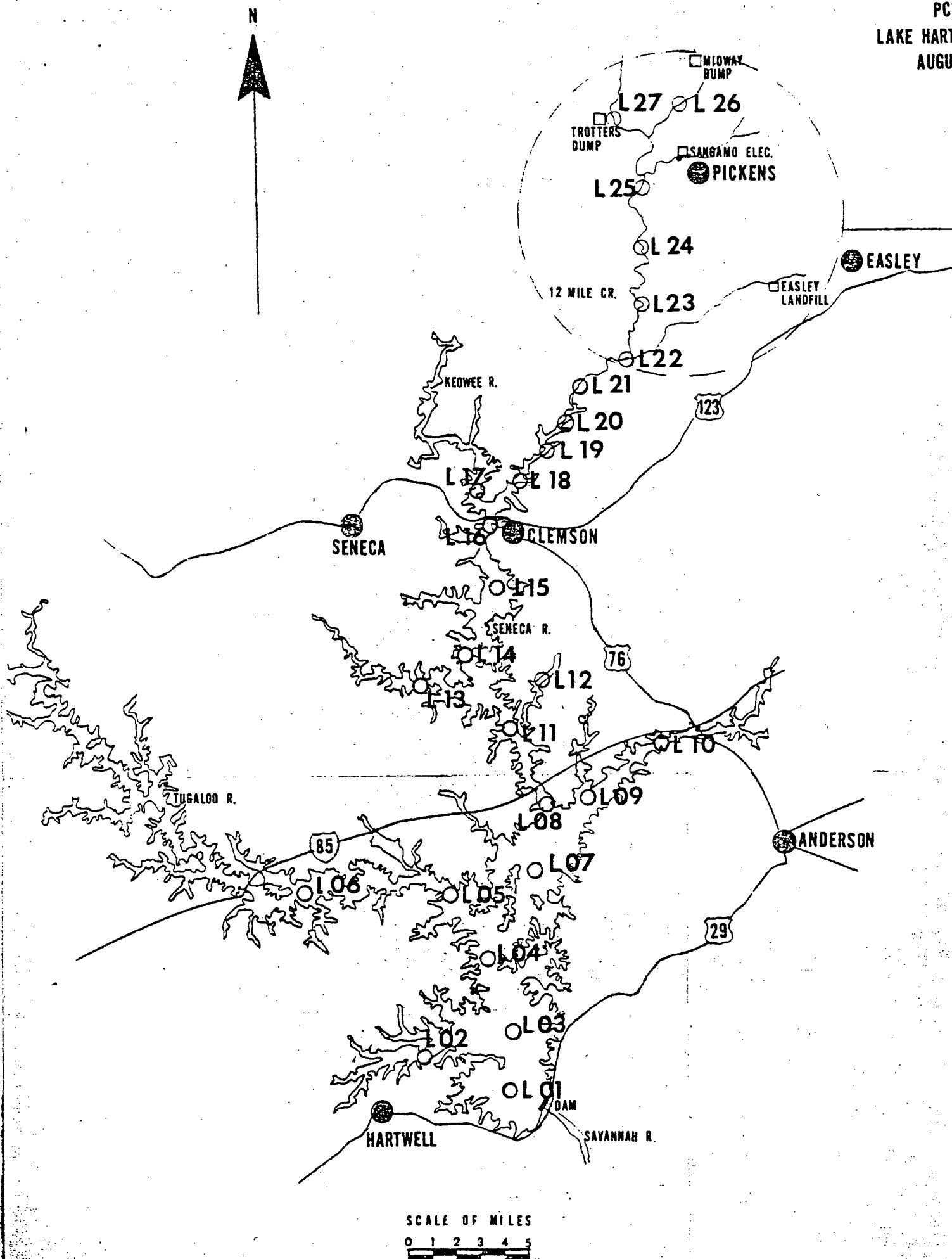
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DATA REPORTING SHEET

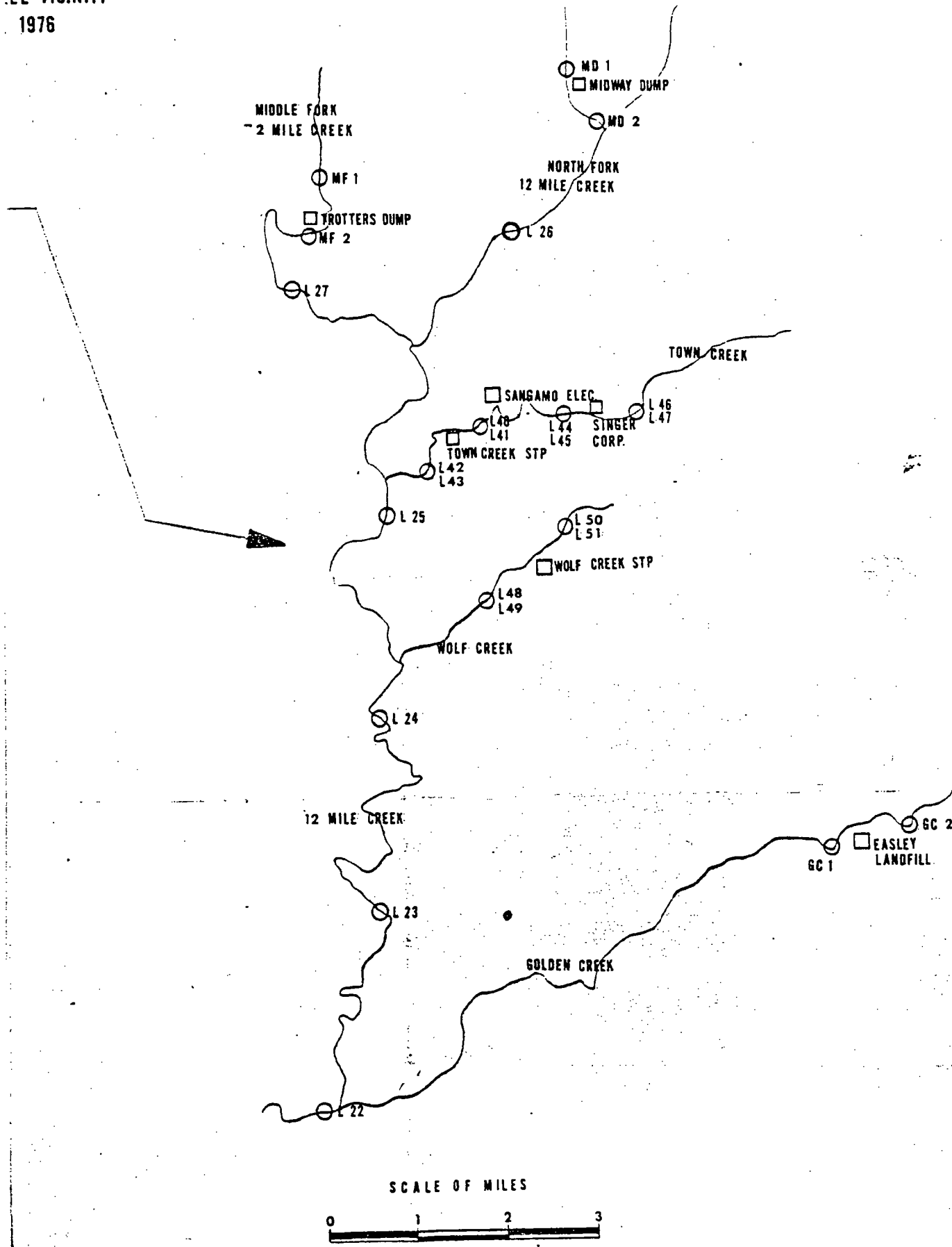
PROJECT Lake Hartwell CHEMIST Dr. Parshall Bush RECEIVED 8-25-76 COMPLETED 8-30-76
 (Sediment) Analyzed by University of Georgia, Extension Poultry Science

ANALYSES TO BE RUN				Aroclor 1016	Aroclor 1254	Total PCB'S				
CUP NO.	SAD NO. 76C-	STATION NO.	DATE SAMP.	mg/kg	mg/kg	mg/kg				
	1958	L-01	8-24-76 0910	ND	ND	ND				
	1959	L-02	8-24-76 0920	Sample Lost						
	1960	L-03	8-24-76 0950	ND	ND	ND				
	1961	L-04	8-24-76 1015	ND	ND	ND				
	1962	L-05	8-24-76 1015	0.01	0.01	0.02				
	1963	L-06	8-24-76 1035	0.61	ND	0.61				
	1964	L-07	8-24-76 1100	0.26	0.61	0.87				
	1965	L-08	8-24-76 1115	2.22	1.02	3.2				
	1966	L-09	8-24-76 1135	ND	2.64	2.6				
	1967	L-10	8-24-76 1200	ND	ND	ND	ND - None Detected			
	1968	L-11	8-24-76 1250	0.17	0.06	0.23	Average Minimum Detection Limit - 0.1 mg/kg			
	1969	L-12	8-24-76 1305	ND	ND	ND				
	1970	L-13	8-24-76 1330	0.45	0.20	0.65				
	1971	L-14	8-24-76 1340	3.12	3.47	6.6				
	1972	L-15	8-24-76 1355	2.6	0.86	3.5				
	1973	L-16	8-24-76 1440	2.99	2.85	5.8				
	1974	L-17	8-24-76 1420	0.84	0.01	0.85				
	1975	L-18	8-24-76 1430	13.90	4.86	19.0				
	1976	L-19	8-23-76 0825	0.32	0.41	0.73				

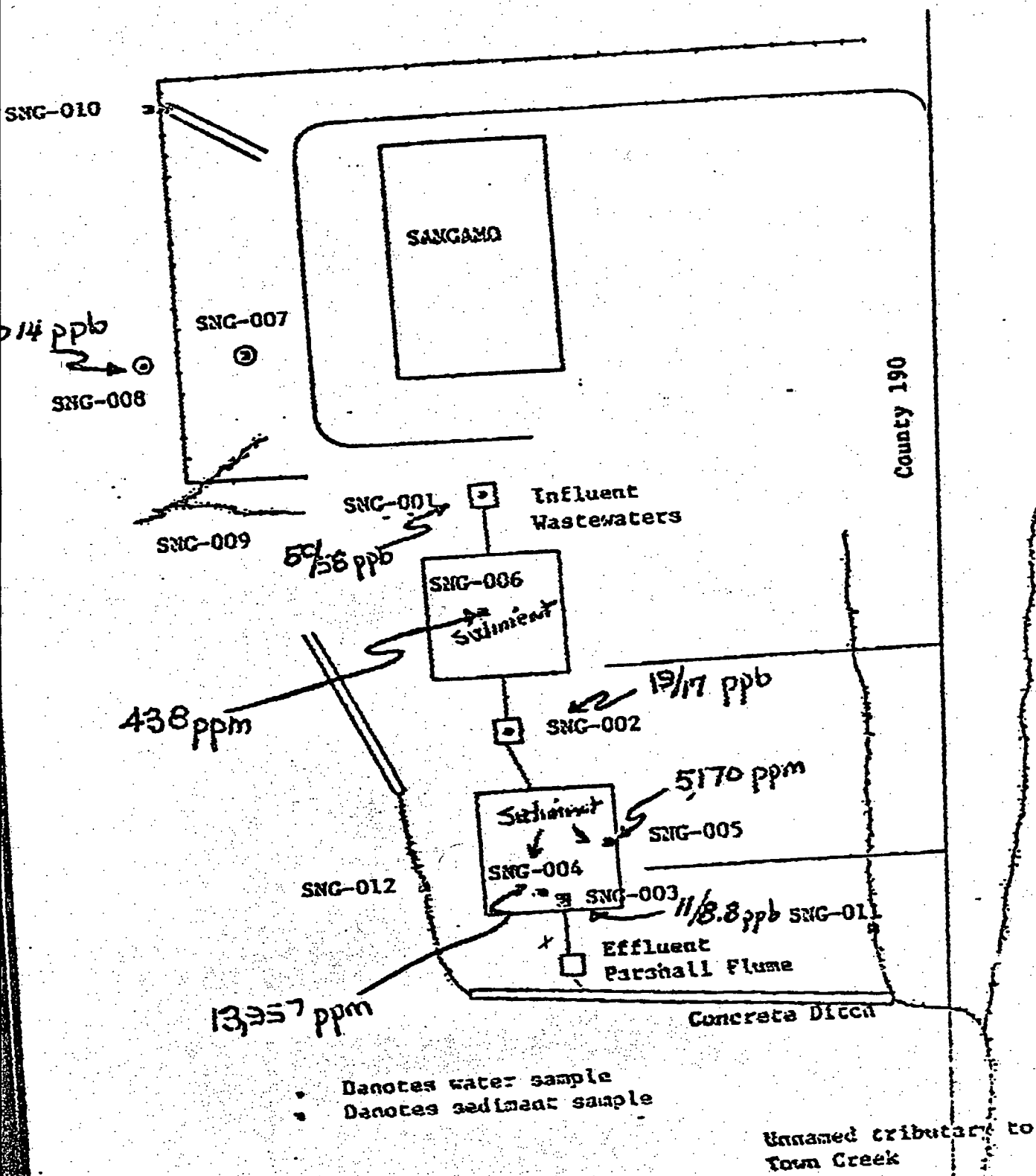
PT
SAMPLING
PCB
LAKE HART
AUGUS



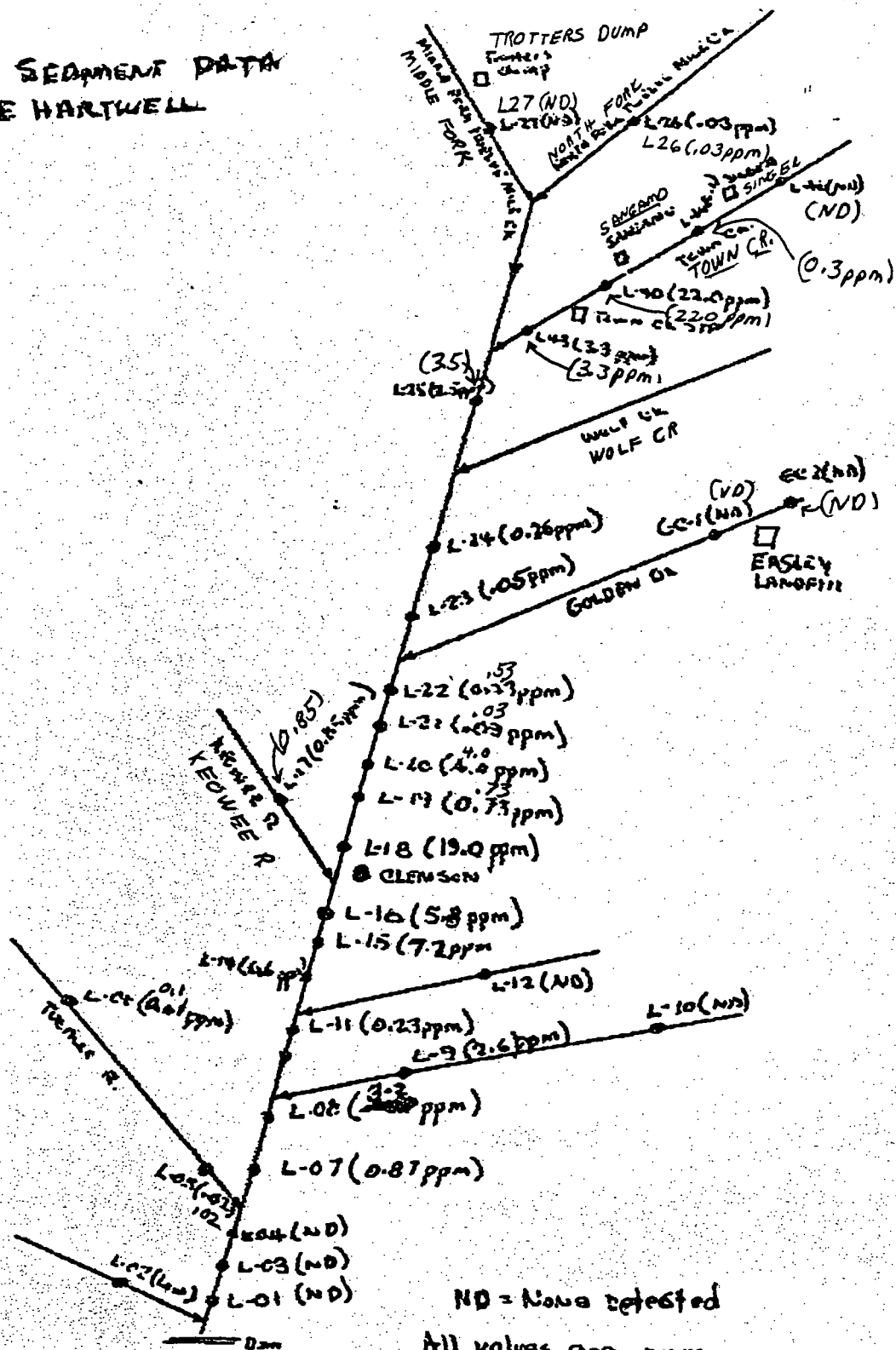
IRE 1
LOCATIONS
STUDY
LL VICINITY
1976



August 1976



PCB SEDIMENT DATA LAKE HARTWELL



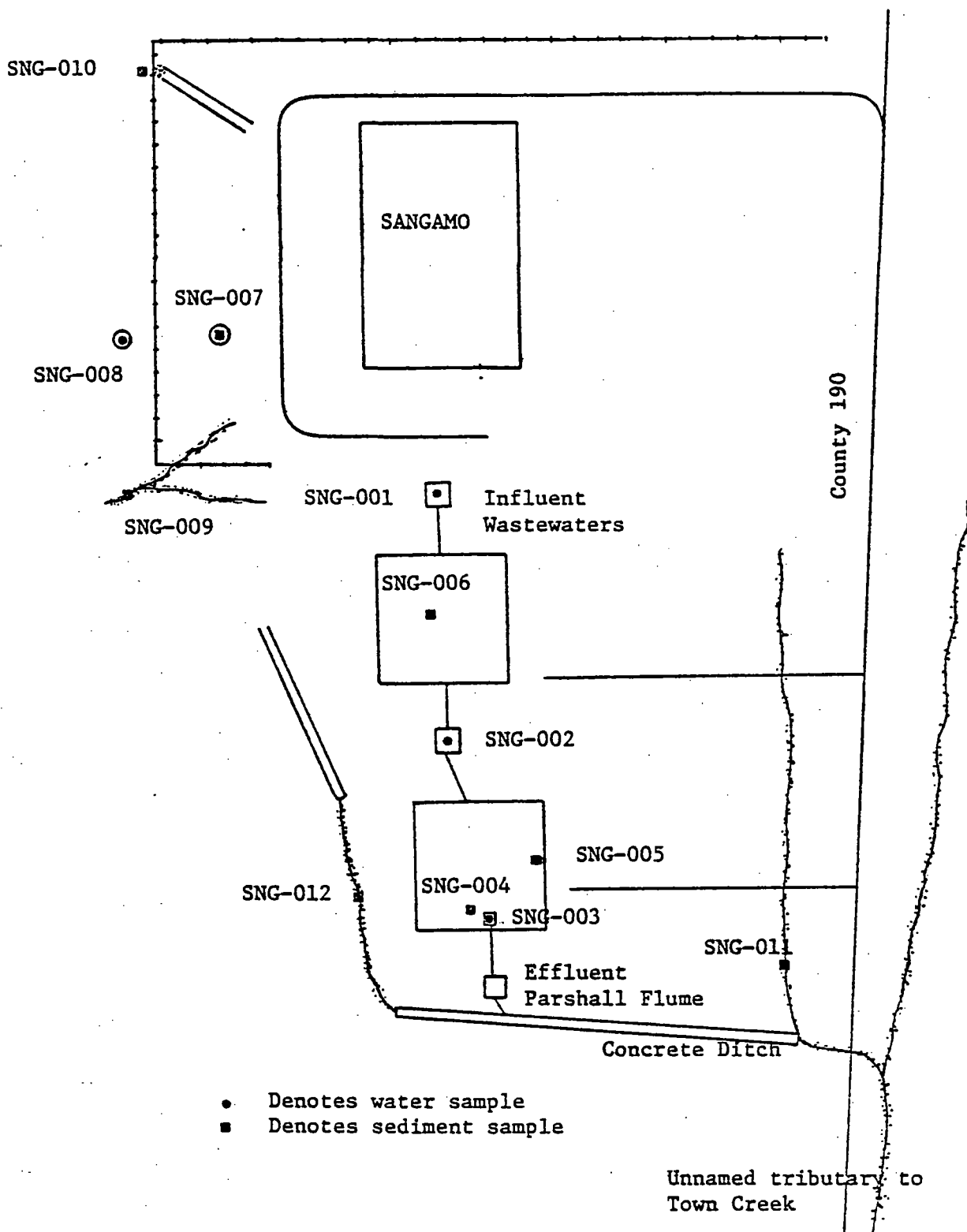
ND = None Detected
All values are ppm

PCB SAMPLING STATION LOCATIONS

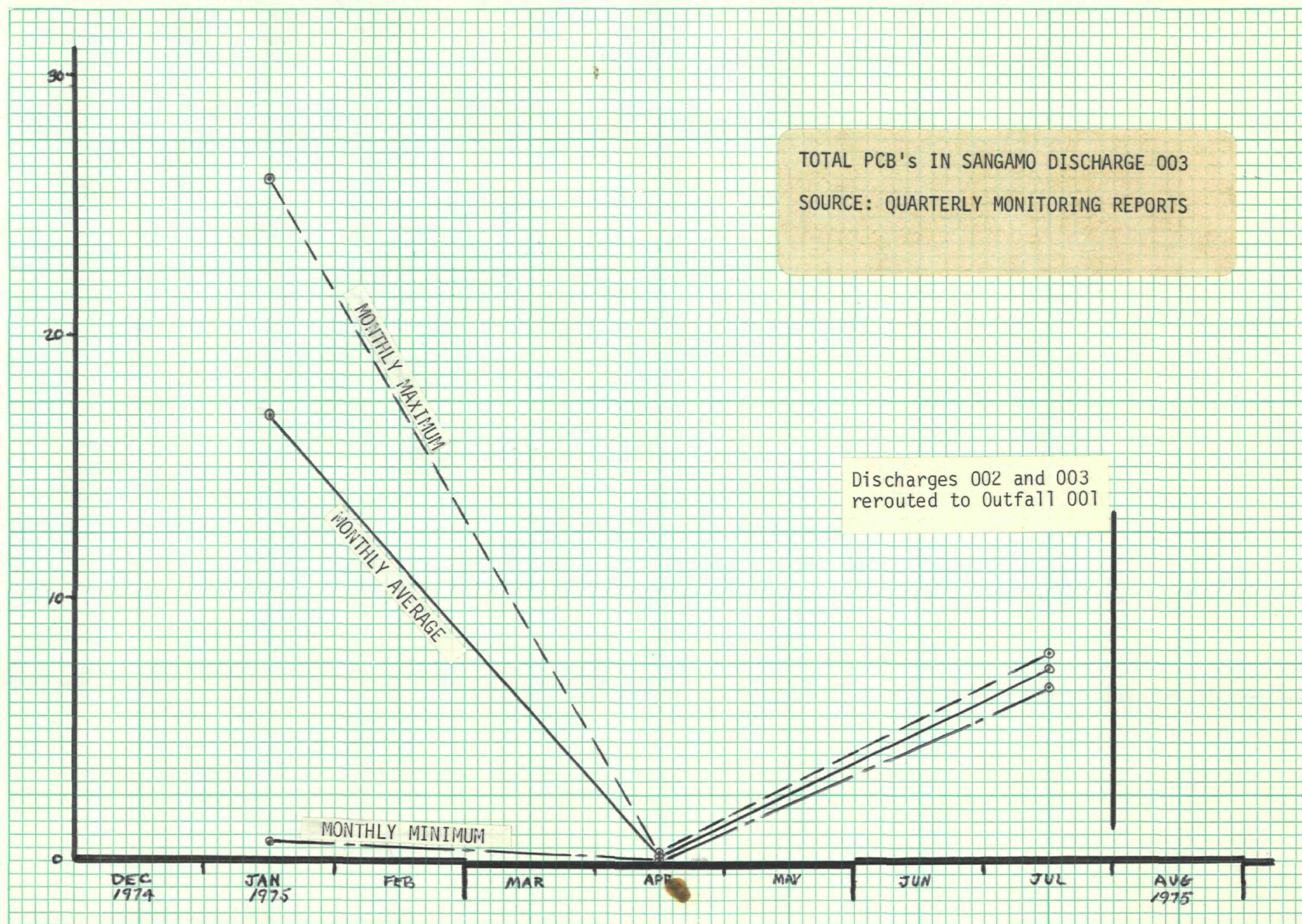
<u>Station</u>	<u>Location</u>
PW-I	Influent, Pickens Wolf Creek Lagoon
PW-E	Effluent, Pickens Wolf Creek Lagoon
PTI	Influent, Pickens Town Creek Lagoon
PTB	Effluent, Pickens Town Creek Lagoon
PTS	Sediment @ Influent Pickens Town Creek Lagoon
CL-I	Influent, Clemson STP
CL-E	Effluent, Clemson STP
CU-I	Influent, Clemson University STP
CU-E	Effluent, Clemson University STP
MF-1	Middle Fork Twelve Mile Creek above Trotters dump
MF-2	Middle Fork Twelve Mile Creek downstream from Trotters dump

SANGAMO SAMPLING STATIONS
PICKENS, SOUTH CAROLINA

August 1976

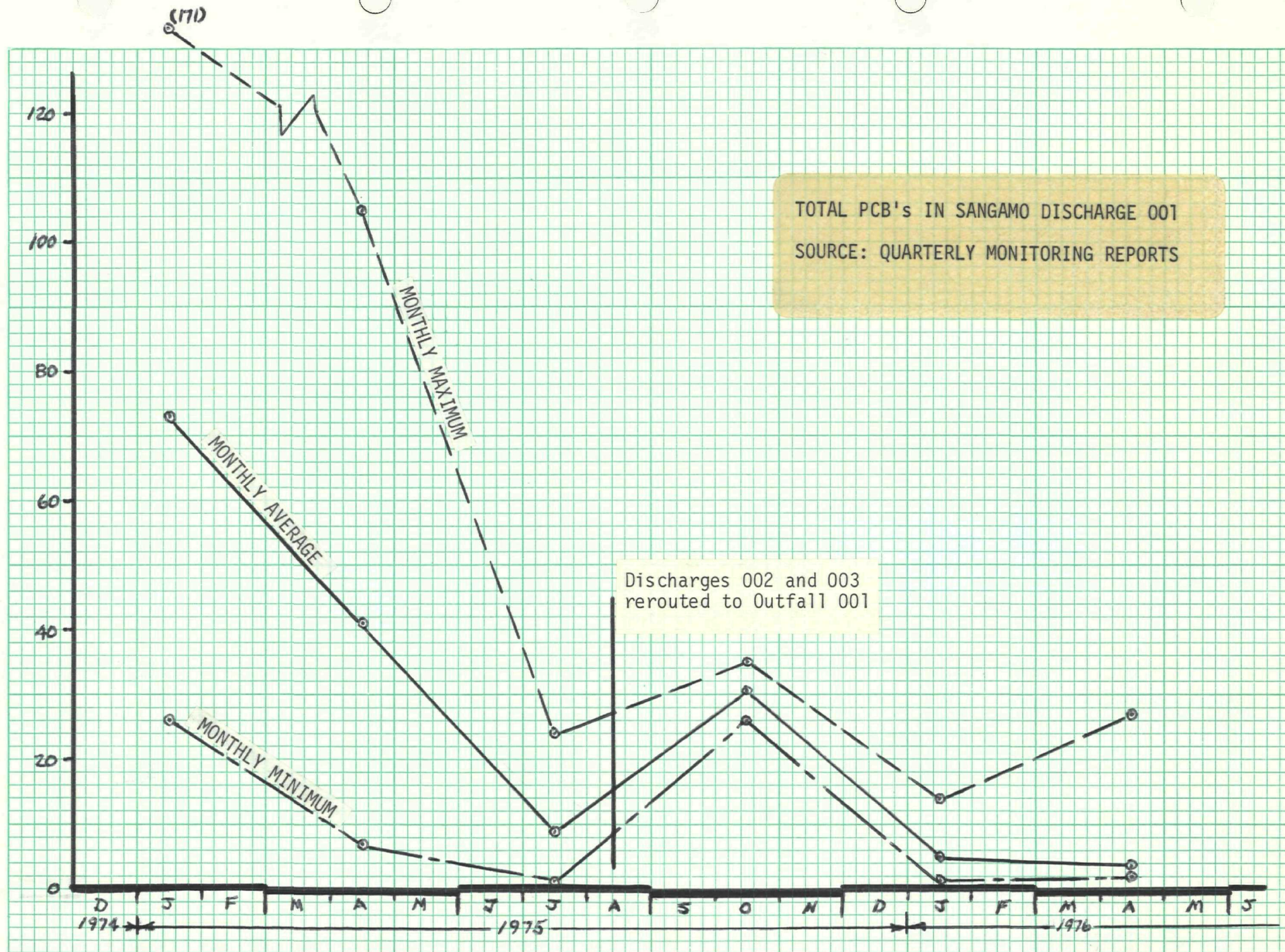


CONCENTRATION OF TOTAL PCB's - PARTS PER BILLION



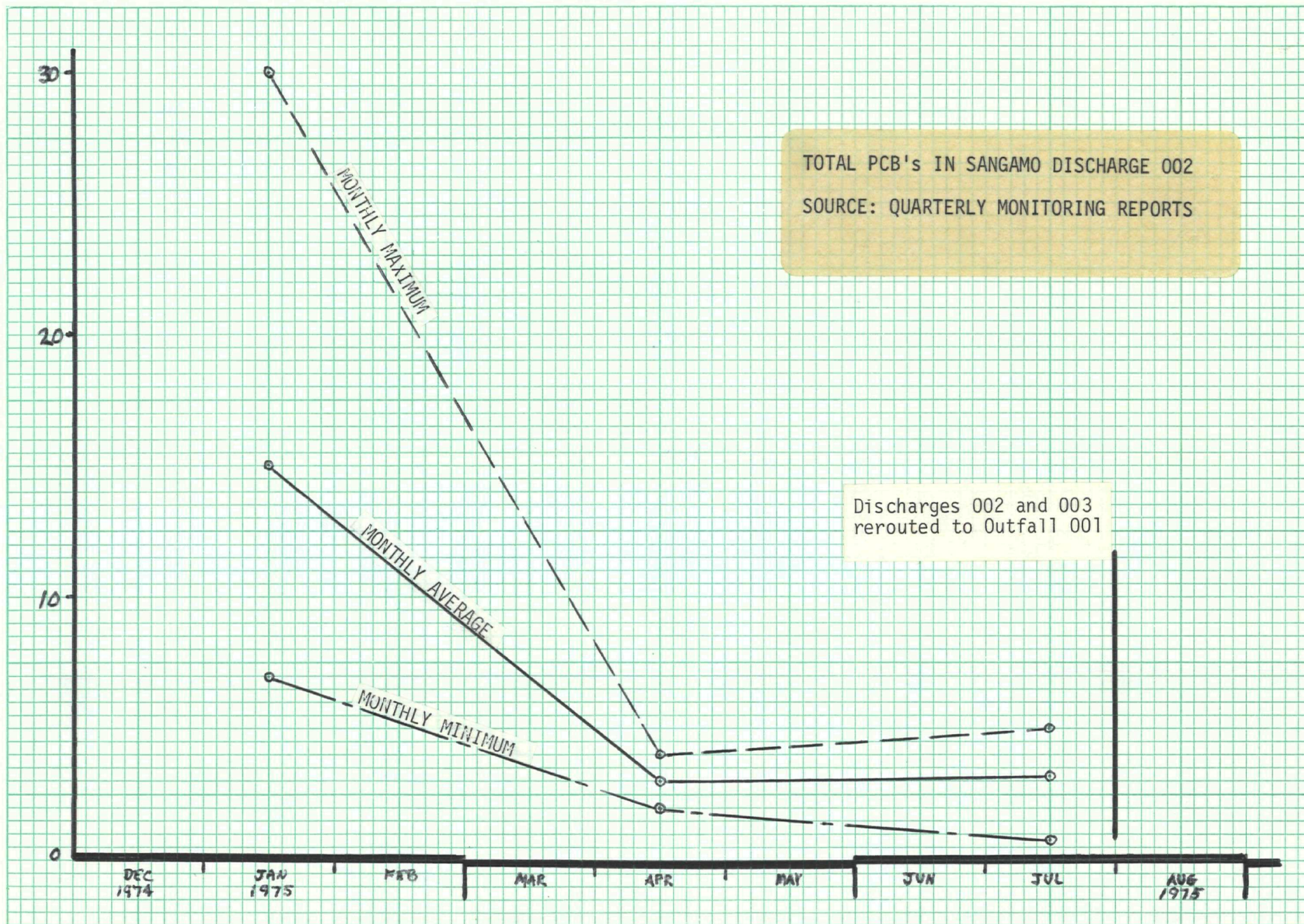
QUARTERLY REPORTING PERIOD - MONTH AND YEAR

CONCENTRATION OF TOTAL PCB's - PARTS PER BILLION



QUARTERLY REPORTING PERIOD - MONTH AND YEAR

CONCENTRATION OF TOTAL PCB's - PARTS PER BILLION



QUARTERLY REPORTING PERIOD - MONTH AND YEAR

U.S. EPA REGION IV

SDMS

Unscannable Material Target Sheet

DocID: 10726408 Site ID: SC0003354412

Site Name: Sargamo Western/Twelve-mile
Hartwell PCB

Nature of Material:

Map: ☐

Computer Disks: ☐

Photos: ☐

CD-ROM: ☐

Blueprints: ☐

Oversized Report: ☒

Slides: ☐

Log Book: ☐

Other (describe): Graph

Amount of material: _____

* Please contact the appropriate Records Center to view the material *